FACTOR SHEETS DEFINED

This section of the Environmental Assessment (EA) is called the “Factor Sheets.” Individual Factor Sheets correspond with specific environmental factors identified in the Basic Sheet 9–Environmental Factors Matrix. The Factor Sheets are used to provide more detailed information on environmental factors and issues that may be substantial and require more of an in-depth discussion than is provided in the Basic Sheets. If there is no substantial impact to a specific environmental factor, a Factor Sheet was not completed.

Factor Sheet A-1

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None Identified	

1. Briefly describe the existing economic characteristics of the area around the project:
Economic data shows the study area has a healthy and growing economy. Much of Dane County's population growth can be attributed to strong growth in the regional economy. The economy slowed after 2008, and the number of jobs declined in 2009 and 2010. The economy rebounded and has shown a steady increase from 2011 to 2018 (see Figure A-1.1).

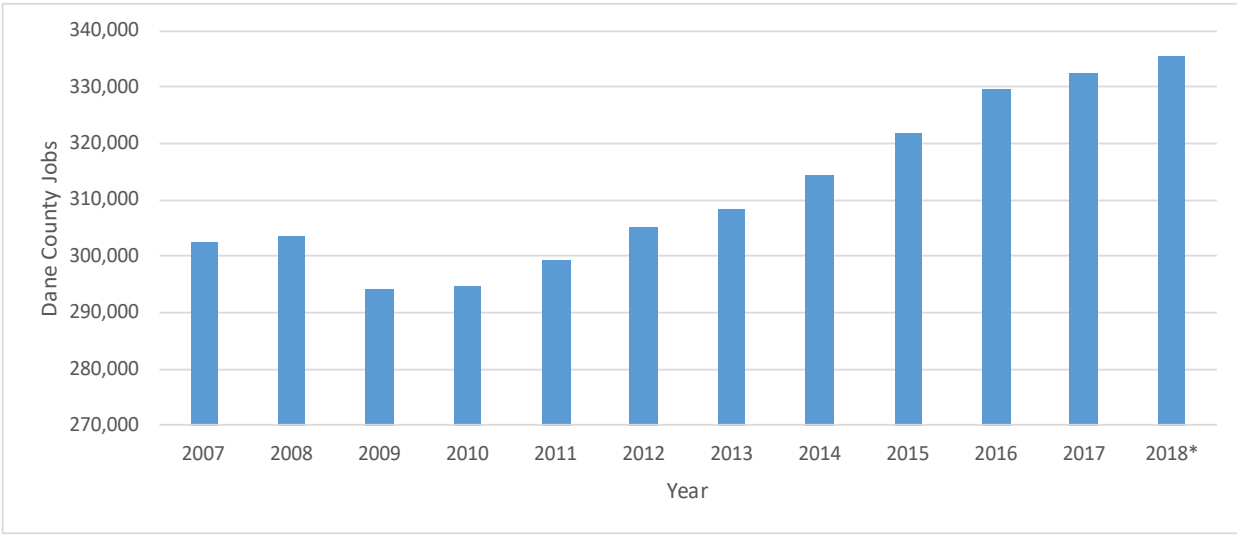


Figure A-1.1 Average Annual Employment: Dane County 2007 to 2018
Source: Wisconsin Department of Workforce Development Quarterly Census of Employment and Wages.
* 2018 data is from U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

The economy of rural areas is primarily farming including beef, dairy, corn, tobacco, oats, alfalfa, soybeans, and canning crops. The agricultural commodities in Dane County include milk, grain, cattle, and calves.

Retail, manufacturing, and industrial elements contribute to the economies of the primarily urban areas of McFarland, Stoughton, Oregon, and Fitchburg. Madison draws commuters from the rural and urban portions of the study area with a wide variety of employment opportunities.

The Dane County economy has a base of employment in government, education, and health care, as Madison is the state capital and the home of the University of Wisconsin's main campus (UW-Madison). The University, in particular, contributes in many ways to the local economy, most notably through its efforts to spin off high technology and biotechnology companies. According to the *2017 Economic and Workforce Profile for Dane County*, prepared by the Wisconsin Department of Workforce Development, the industries of education and health made up 25 percent of the total county employment in 2016 and were the largest employment industries. All sectors, except manufacturing and public administration, added jobs from 2015 to 2016. In 2016, Dane County had the lion's share of the region's jobs (72 percent).

The report also provides ten-year (2014 to 2024) regional employment projections by industry sector for the South-Central Workforce Development Area (WDA). The WDA includes Columbia, Dane, Dodge, Jefferson, Marquette, and Sauk Counties. All sectors are projected to have net positive job growth over the 10-year period. Education and Health Services is projected to contribute approximately 26 percent to total net job growth, followed by Professional and Business Services (15 percent), Leisure and Hospitality (12 percent), Information (12 percent), and Trade, Transportation, and Utilities (8 percent).

Tourism also plays a role in the area's economy given the many recreational destinations throughout the project area. A number of tourist destinations attract people from the state and Midwest. Attractions include:

- The Yahara River chain of lakes that includes Lake Mendota, Lake Monona, Lake Waubesa, Lake Kegonsa, and Upper and Lower Mud lakes.
- Several parks and natural areas, trails, and campgrounds.
- Golf courses in Stoughton, Oregon, Fitchburg, Madison, and Albion.
- Historic districts and retail shops in the smaller communities.
- Festivals and farmers markets in the smaller communities.
- Events and festivals related to Madison and UW-Madison.

2. Discuss the economic advantages and disadvantages of the proposed action and whether advantages would outweigh disadvantages. Indicate how the project would affect the characteristics described in item 1 above:

Advantages
With the proposed action, a high volume of US 51 traffic would continue to flow through downtown Stoughton and McFarland, giving exposure to businesses along US 51.

The proposed action would result in:

- A reconstructed highway with new pavement and a new pavement structure that benefits local businesses.
- Limited construction-related disruptions, a benefit to local businesses and consumers.
- Limited R/W acquisition, few residential relocations, no business relocations, and minimal impact to local businesses, consumers, and residents.
- No impacts to historic properties and historic districts that are local attractions.
- Improved intersection geometries resulting in improved safety and a possible reduction in crashes benefiting commuters, local residents, and tourism in the area. Fewer crashes could result in reduced negative economic impacts because of property damage, injuries, and loss of life. In McFarland, US 51 serves as a major commercial artery and the reconstructed facility and intersection improvements could encourage patronage to the many businesses along the corridor. Babcock Park users would enjoy improved access to use the campground and fishing, boating, and other park facilities. Park users are likely patrons of local businesses.
- Improved bicycle and pedestrian accommodations that would increase the area's appeal to people from within and outside the area who enjoy walking and biking, and who may visit local commercial establishments.

Disadvantages
With the proposed action, a high volume of US 51 traffic, including truck traffic, would continue to flow through downtown Stoughton and McFarland.

The proposed action would result in:

- Reconstruction of the existing 2- to 4-lane roadway on existing alignment and the loss of some on-street parking in Stoughton, and the reconstruction of the existing 4-lane roadway on existing alignment in McFarland.

3. What effect will the proposed action have on the potential for economic development in the project area?

☐ **The proposed project will have no effect on economic development.**
☒ **The proposed project will have an effect on economic development.**

☒ Increase, describe:
Improved safety, pavement conditions, and bicycle accommodations along the rural portions would likely increase the area's appeal to people who enjoy biking and seek bike accommodations for recreational purposes and as an alternative mode for commuting. Improved safety, pavement conditions, and bicycle and/or pedestrian accommodations within urban areas and improved access to Babcock Park in McFarland would likely increase the appeal of the urban areas to people who enjoy walking, biking, and recreation.

☒ Decrease, describe:

In general, the proposed action could result in continued mobility concerns along the rural Stoughton to McFarland portion of US 51 corridor. Traffic operations during peak hours could make travel along US 51 less desirable and this could affect people's desire to live, work, or shop in the area. Over time, the proposed action's improvements could dampen development pressures along the corridor between Stoughton and McFarland because of lower than desired traffic operations LOS and the median that would divide northbound and southbound movements for 4.2 miles (approximately 74 percent) of the total 5.6-mile length of this section. These conditions may decrease the potential for economic development in the area.

BUSINESS EVALUATION

Wisconsin Department of Transportation

Factor Sheet A-2

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Is a Conceptual Stage Relocation Plan attached to this document?

☒ Yes
☐ No–(Explain) _____

The Executive Summary of the 2019 CSRP is provided as Appendix I. The complete CSRP can be obtained by contacting the WisDOT Southwest (SW)-Region Office.

2. Describe the economic development or existing business areas affected by the proposed action:
The rural areas of the US 51 study area outside of Stoughton and McFarland are dominated by agriculture. This rural landscape has numerous farm operations with a few scattered, small commercial, and manufacturing businesses.

US 51 is the commercial route and Long Truck Route that extends from I-39/90 through Stoughton and McFarland to US 12/18 (Madison South Beltline) and serves as the connection to several major area businesses. Stoughton has several manufacturing and service businesses such as Nelson Global Products, Universal AET, Cummins Filtration, Stoughton Trailers, Stellar Services, Power Curve Tech, Colorcon, Zalk Joseph, B&G Foods (Ortega), Uniroyal, and others. The Stoughton area is attractive to businesses because of the access to I-39/90 and US 51 and rail access with the Wisconsin & Southern Railroad freight line. Downtown Stoughton has many commercial and retail businesses and specialty shops, restaurants, historic districts, and a river crossing that appeals to consumers and tourists. Most of the newer commercial development in Stoughton is located along US 51 on the west side of Stoughton from WIS 138 north to Velkommen Way. *Stoughton's Comprehensive Plan* identifies this western area for continued commercial and retail development extending farther north to County B (east). Currently, at the northwest quadrant of US 51 and WIS 138 (west), a commercial development called Kettle Park West (KPW) is underway. This development has included the recent extension of Jackson Street west of US 51, a new roundabout on WIS 138 (west), and construction of several commercial businesses in that quadrant. The KPW development also includes planned residential development extending north to Rutland-Dunn Townline Road. Another area of planned commercial development identified in *Stoughton's Comprehensive Plan* is at the existing, centrally located industrial park. Expansion of the park north to County B (east) near Williams Drive is planned in this area. County B (east) and parts of US 51, both to the north and east of Stoughton, also support many farms and a few scattered commercial businesses.

McFarland is attractive to businesses because of access to both US 12/18 and I-39/90. McFarland State Bank and several restaurants, retail stores, shops, and service businesses face US 51. Other major businesses in McFarland include AMTELCO, Global Printer Services, Ferguson, City Wide Insulation, Midwest Refrigeration, Madison Forms, Entwistle Metal Fabricating, and others. McFarland updated its Comprehensive Plan in 2017 and McFarland also has an older Highway 51 Corridor Concept Plan. McFarland's Future Land Use Maps identify commercial, mixed-use/flex commercial, industrial, and commercial park along the US 51 corridor north of Babcock Park. Land use south of Babcock Park is mapped as agriculture preservation.

3. Identify and discuss existing modes of transportation and their traffic within the economic development or existing business area:
Personal vehicles are the dominant mode of transportation within the study area. Currently, no areas on the US 51 corridor are served directly by Madison Metro Transit. Designated bicycle and pedestrian facilities are limited and discontinuous within the urban centers of Stoughton and McFarland. In the rural areas of the project corridor between Stoughton and McFarland and east of Stoughton, there are no designated bicycle or pedestrian facilities. Stoughton is working to encourage pedestrian use in the downtown area by improving facilities along the Yahara River as it runs through downtown. Expansion of pedestrian facilities along US 51 adjacent to businesses is also desired in McFarland. Stoughton and McFarland also desire improved bicycle

accommodations within each community with potential connections to planned rural and regional trails that would connect communities.

Most of the traffic on US 51 is local and commuter traffic with some agricultural vehicles. The percentage of trucks on US 51 varies by location. In Wisconsin, the percentage of daily trucks within the total traffic volume on rural arterials (non-freeway) typically ranges from 10 to 14 percent; on urban arterials (non-freeway), daily truck percentages range from 4 to 7 percent.[1]

WisDOT collected daily truck data at five locations throughout the corridor from 2012 through 2017. Intersection traffic counts performed by the project team in October 2014 indicated that the percentage of trucks on US 51 varies by location and is generally higher in the AM peak hour than the PM peak hour. The AM peak period is generally from 6 to 9 A.M. with the peak hour from 7 to 8 A.M. The PM peak period is generally from 3 to 7 P.M. with the peak hour from 5 to 6 P.M. A review of the daily and the peak hour truck data, by corridor location, shows the following:

- North of Stoughton, the AM range of 2 to 12 percent is near the typical range for a rural arterial. Daily truck percentages range from 6 to 8 percent at one site north of County B (east).
- East of Stoughton, the range is 4 to 8 percent during the AM peak hour. The daily truck percentage reported at one site between County A and County W was 11 percent.
- In downtown Stoughton, trucks range from 1 to 11 percent during the AM peak hour, which is higher than typical for an urban principal arterial. Daily truck percentages ranged from 9 to 10 percent at two sites in the downtown area.

The proximity of I-39/90, deliveries to and from Stoughton, and trucking associated with manufacturing businesses in Stoughton may all be contributing to the higher truck percentages within Stoughton. Based on the location of the existing truck weigh scale located north of Stoughton, trucks are not diverting through Stoughton simply to avoid weigh scales in other locations.

Because of the agricultural lands adjacent to the rural portions of the corridor, farm vehicles are also part of the traffic mix. The public voiced concerns early on in the study about the difficulty in passing slower-moving, farm machinery vehicles. Existing bicyclist and pedestrian usage of the corridor has not been measured because bicycle and pedestrian facilities between Stoughton and McFarland are deficient.

4. Identify and discuss effects on the economic development potential and existing businesses that are dependent upon the transportation facility for continued economic viability:

☒ The proposed project will have no effect on a transportation-dependent business or industry.
☐ The proposed action may change the conditions for a business that is dependent upon the transportation facility. Identify effects, including effects which may occur during construction.

5. Describe both beneficial and adverse effects on:

A. The existing business area affected by the proposed action. Include any factors identified by business people that they feel are important or controversial.

The proposed action's improvements are expected to have a beneficial effect on the economic development potential of existing business areas located mainly in the urban areas of Stoughton and McFarland. In these urban areas, US 51 would be reconstructed, providing new pavement, intersection improvements, and improved pedestrian facilities for commuters and consumers. Similar improvements through the rural areas east of Stoughton and between Stoughton and McFarland would also have some beneficial effects. The improvements would benefit cyclists with paved shoulder accommodations, agricultural businesses, and commuters or consumers traveling to and from the urban areas of McFarland or Stoughton.

[1] WisDOT vehicle classification data spreadsheet https://wisconsindot.gov/Pages/projects/data-plan/traf-fore/default.aspx (Accessed August 30, 2019). The ranges provided are based on the latest four years of data available (2014 to 2017). The functional class names and numbers, in parenthesis, used in this analysis were rural principle arterials (2), rural minor arterials (6), urban principle arterial (14), and urban minor arterial (16). The truck percentages reflect the total of single-unit trucks and combination-unit (i.e. tractor-trailor) trucks.

The proposed action does not provide capacity expansion in the rural section between Stoughton and McFarland. The projected increasing traffic volumes on the 2-lane highway in this section would result in congestion during peak travel times, although 2045 peak commute times would remain similar to 2015 conditions. This could impact locational choices of commercial and residential development.

The proposed action would impact some businesses by changing access or by reducing the number of parking spaces. Table A-2.1 shows the access and reduced parking impacts that would occur.

Table A-2.1 Business Impacts

Business	Address	Alternative H Impact
Various Stoughton Businesses	Varies	Access: There are no access changes to the side roads in the Stoughton. Parking: Approximately seven of the 108 existing US 51 on-street parking spaces are anticipated to be removed between the railroad crossing east of 5th Street and Page Street. These on-street marked parking spaces are located on the US 51 bridge over the Yahara River and between the railroad and 5th Street. East of the railroad, on-street parking in the predominantly residential area is proposed to be removed based on the resolution provided by Stoughton and comments provided by residents after the August 2015 PIM. Three on-street parking spaces would also be removed from 4th Street at the US 51 and 4th Street intersection. The spaces would be removed from the south approach to accommodate a left-turn lane.
Gates Collision Center and Stoughton Garden Center	1477 US 51 (near Roby Road)	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Northbound vehicles leaving the businesses would first travel approximately 0.5 miles south to the WIS 138 (west) roundabout and northbound vehicles going to the businesses would first travel approximately 0.1 miles north to the Roby Road roundabout.
Squirrels Nest	2655 US 51 (near Mahoney Road)	Access: Existing direct access would be removed from US 51 and relocated to a proposed new access road west of the business.
Automotive Perfection	2663 US 51 (near Mahoney Road)	Access: Existing direct access would be removed from US 51 and relocated to a proposed new access road west of the business.
BP Gas Station	4701 Burma Road, McFarland	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Southbound ingress or egress traffic will need to use the driveway on Burma Road.
Maple Tree Supper Club	6010 US 51, McFarland	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Northbound ingress or egress traffic will need to use the driveway on Burma Road. Parking: One of the existing 114 parking spaces would be removed. This parking space is currently located within existing WisDOT R/W. The width of 21 parking spaces along US 51 would be reduced from 9 feet to 8 feet. The width of the aisle located west of this row of parking would also be reduced approximately 2 to 5 feet, but would remain at least 25 feet wide.
Kwik Trip	4701 Farwell Street, McFarland	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Southbound ingress or egress traffic would need to use the driveway on Farwell Street.

Business	Address	Alternative H Impact
McFarland State Bank	5990 US 51, McFarland	Access: Alternative H would not directly change access for the bank since there are no existing access points to US 51 on the property. Currently, access for the bank is from a driveway off Severson Street on the south and via a shared parking lot with the strip mall to the north. The existing median opening on US 51 providing full access to the strip mall north of the bank would be closed under Alternative H and the driveway to the mall would become right-in/right-out only access. Traffic within the parking lot serving the bank could increase as northbound traffic to the strip mall would be required to use either the Severson Street or Dale Road intersections to access the strip mall or shared parking lot just north of the bank. Parking: No parking loss is anticipated; however, some parking is anticipated to be reconstructed.
Strip Mall	5900 US 51 to 5922 US 51, McFarland	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Northbound ingress or egress traffic would need to use either Severson Street or Dale Road. Traffic using the Severson Street driveway would have to travel through the McFarland State Bank parking lot.
Culver's	4700 Farwell Street, McFarland	Access: The current full-access driveway along US 51 would become right-in/right-out only access. Access for southbound ingress and egress traffic would only be allowed from the Farwell Street intersection.
Mini warehouse access	4712 Farwell Street, McFarland	Access: The mini warehouse east of Culver's currently has access to US 51 and to Farwell Street through access easements. The access to US 51 through the Culvers property would become right-in/right-out only access. Access for southbound ingress and egress traffic would only be allowed from the Farwell Street intersection.

B. The existing employees in businesses affected by the proposal. Include, as appropriate, a discussion of effects on minority populations or low-income populations.

The proposed action's intersection improvements would likely provide a safer route for employees to travel to and from work. Although minority and low-income populations have been identified in the project area, no effects to any businesses associated with those populations have been identified.

6. Estimated number of businesses and jobs that would be created or displaced because of the project:

Business/Job Type	Businesses			Jobs	
	Created	Displaced	Value*	Created	Displaced
Retail	0	0		0	0
Service	0	0		0	0
Wholesale	0	0		0	0
Manufacturing	0	0		0	0
Other (List)	0	0		0	0

* Value obtained from the Conceptual Stage Relocation Plan.

7. Are any owners or employees of created or displaced businesses elderly, disabled, low-income or members of a minority group?

☐ No
☐ Yes–If yes, complete Factor Sheet B-4, Environmental Justice Evaluation.

The proposed action does not result in any created or displaced businesses and therefore this question is not relevant to the proposed action.

8. Is Special Relocation Assistance Needed?

☒ No
☐ Yes–Describe special relocation needs.

The proposed action does not result in any created or displaced businesses.

9. Identify all sources of information used to obtain data in item 8:

☒ WisDOT Real Estate Conceptual Stage Relocation Plan
☐ Newspaper listing(s)
☐ Multiple Listing Service (MLS)
☒ Other–Identify: Zillow and Trulia websites and discussion with businesses.

10. Describe the business relocation potential in the community:

A. Total number of available business buildings in the community.

B. Number of available and comparable business buildings by type and price (Include business buildings in price ranges comparable to those being dislocated, if any).

Number of available and comparable type business buildings in the price range of less than $100,000
Number of available and comparable type business buildings in the price range of $100,000 to $200,000
Number of available and comparable type business buildings in the price range of $200,000 to $300,000
Number of available and comparable type business buildings in the price range of $300,000 to $400,000
Number of available and comparable type business buildings in the price range of more than $400,000

The proposed action does not result in any created or displaced businesses and, therefore, this question is not relevant to the proposed action.

11. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or Federal Highway Administration (FHWA) regulation 49 CFR Part 24. Check all that apply:

Not applicable. There are no business displacements.

☐ Business acquisitions and relocations will be completed in accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended." In addition to providing for payment of "Just Compensation" for property acquired, additional benefits are available to eligible displaced persons forced to relocate from their business. Some available benefits include relocation advisory services, reimbursement of moving expenses, and replacement of business payments. In compliance with State law, no person would be displaced unless a comparable replacement building for the business will be provided.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners will be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired will be inspected by one or more professional appraisers. The property owner will be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Reasonable cost of an owner's appraisal will be reimbursed to the owner if received within 60 days of initiation of negotiations. Based on the appraisal(s) made, the value of the property will be determined, and that amount offered to the owner.

☐ Describe other relocation assistance requirements, not identified above.

12. **Identify any difficulties relocating a business displaced by the proposed action and describe any special services needed to remedy identified unusual conditions:**
    Farms and businesses are usually more difficult to relocate than residences. Finding available comparable farm or commercial properties can be difficult, and new construction may be the only option. The proposed action does not require displacement of a farm operation. While agricultural land would be acquired, no farm buildings would be impacted, and farming operations could continue. The proposed action does not require displacement of any businesses.

13. **Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated. Also discuss accommodations made to minimize adverse effects to businesses that may be affected by the project, but not relocated:**
    The proposed action does not result in any created or displaced businesses.

AGRICULTURE EVALUATION

Wisconsin Department of Transportation

Factor Sheet A-3

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Total acquisition interest, by type of agricultural land use:

Type of Land Acquired From Farm Operations	Type of Acquisition (acres)			Total Area Acquired (acres)
	Fee Simple	PLE[1]	TLE[2]	
Crop land and pasture	33.5	0.0	2.5	36.0
Woodland	2.5	0.0	0.0	2.5
Land of undetermined or other use (e.g., wetlands, yards, and roads)	9.7	0.0	0.2	9.9
Totals	45.7	0.0	2.7	48.4

Land represented in the table is from farm operations only. There is other woodland and other land use in the corridor.
Farm operations were determined by including all property owners that had agricultural land impacted by the proposed improvement.
[1] Permanent limited easement
[2] Temporary limited easement

2. Indicate number of farm operations from which land will be acquired:

Acreage to be Acquired	Number of Farm Operations
Less than 1 acre	25
1 acre to 5 acres	11
More than 5 acres	1

3. Is land to be converted to highway use covered by the Farmland Protection Policy Act?

☐ No

- ☐ The land was purchased prior to August 6, 1984 for the purpose of conversion.
- ☐ The acquisition does not directly or indirectly convert farmland.
- ☐ The land is clearly not farmland
- ☐ The land is already in, or committed to urban use or water storage.

☒ Yes (This determination is made by the Natural Resources Conservation Service (NRCS) via the completion of the Farmland Impact Conversion Rating Form, NRCS Form AD-1006)

- ☒ The land is prime farmland which is not already committed to urban development or water storage.
- ☒ The land is unique farmland.
- ☒ The land is farmland which is of statewide or local importance as determined by the appropriate state or local government agency.

4. Has the Farmland Impact Conversion Rating Form (AD-1006) been submitted to NRCS?

☐ No–Explain.
☒ Yes

- ☐ The Site Assessment Criteria Score (Part VI of the form) is less than 60 points for this project alternative.
  Date Form AD-1006 completed. _____
- ☒ The Site Assessment Criteria Score is 60 points or greater.
  Date Form AD-1006 completed. October 8, 2015 (provided in Appendix H)

5. Is an Agricultural Impact Statement (AIS) Required?

☐ No

- ☐ Eminent Domain will not be used for this acquisition
- ☐ The project is a "Town Highway" project
- ☐ The acquisition is less than 1 acre
- ☐ The acquisition is 1-5 acres and the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) chooses not to do an AIS.
- ☐ Other. Describe _____

☒ Yes

- ☐ Eminent Domain may be used for this acquisition.
- ☐ The project is not a "Town Highway" project
- ☐ The acquisition is 1-5 acres and DATCP chooses to do an AIS.
- ☒ The acquisition is greater than 5 acres

6. Is an Agricultural Impact Notice (AIN) Required?

☐ No, the project is not a State Trunk Highway Project–AIN not required but complete questions 7-16.
☒ Yes, the project is a State Trunk Highway Project–AIN may be required.

Is the land acquired "non-significant"?

☐ Yes–(All must be checked) An AIN is not required but complete questions 7-16.

- ☐ Less than 1 acre in size
- ☐ Results in no severances
- ☐ Does not significantly alter or restrict access
- ☐ Does not involve moving or demolishing any improvements necessary to the operation of the farm
- ☐ Does not involve a high value crop

☒ No

- ☒ Acquisition 1 to 5 acres–**AIN required**. Complete Pages 1 and 2, Form DT1999. (Pages 1 and 2, Figure 1, Procedure 21-25-30.)
- ☒ Acquisition over 5 acres–**AIN required**. Complete Pages 1, 3 and 4, Form DT1999. (Pages 1, 3 and 4, Figure 1, Procedure 21-25-30)

If an AIN is completed, do not complete the following questions 7-16.

7. Identify and describe effects to farm operations because of land lost due to the project:

☐ Does Not Apply.
☐ Applies–Discuss.

8. Describe changes in access to farm operations caused by the proposed action:

☐ Does Not Apply.
☐ Applies–Discuss.

9. Indicate whether a farm operation will be severed because of the project and describe the severance (include area of original farm and size of any remnant parcels):

☐ Does Not Apply.
☐ Applies–Discuss.

10. **Identify and describe effects generated by the acquisition or relocation of farm operation buildings, structures or improvements (e.g., barns, silos, stock watering ponds, irrigation wells, etc.). Address the location, type, condition and importance to the farm operation as appropriate:**

☐ Does Not Apply.
☐ Applies–Discuss.

11. **Describe effects caused by the elimination or relocation of a cattle/equipment pass or crossing. Attach plans, sketches, or other graphics as needed to clearly illustrate existing and proposed location of any cattle/equipment pass or crossing:**

☐ Does Not Apply.
☐ Replacement of an existing cattle/equipment pass or crossing is not planned. Explain.
☐ Cattle/equipment pass or crossing will be replaced.
☐ Replacement will occur at same location.
☐ Cattle/equipment pass or crossing will be relocated. Describe.

12. **Describe the effects generated by the obliteration of the old roadway:**

☐ Does Not Apply.
☐ Applies–Discuss.

13. **Identify and describe any proposed changes in land use or indirect development that will affect farm operations and are related to the development of this project:**

☐ Does Not Apply.
☐ Applies–Discuss.

14. **Describe any other project-related effects identified by a farm operator or owner that may be adverse, beneficial or controversial:**

☐ No effects indicated by farm operator or owner.
☐ Applies–Discuss.

15. **Indicate whether minority or low-income population farm owners, operators, or workers will be affected by the proposal: (Include migrant workers, if appropriate.)**

☐ No
☐ Applies–Discuss.

16. **Describe measures to minimize adverse effects or enhance benefits to agricultural operations:**

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Give a brief description of the community or neighborhood affected by the proposed action:
The US 51 study corridor is located in the southeast portion of Dane County in south central Wisconsin. The study corridor extends from I-39/90 east of Stoughton, continuing through Stoughton and McFarland, and terminating at US 12/18 (Madison South Beltline). It passes through five rural towns, Albion, Dunkirk, Rutland, Pleasant Springs, and Dunn. The two main population centers in the study area are Stoughton and McFarland. Oregon is on the western edge of the study area. Land use maps for the study area's communities are shown on Figures 19 and 20.

The area is rich in historic as well as natural resources including forested woodlands, wetlands, lakes and streams, steep slopes, and open agricultural croplands. There are many archaeological sites along the US 51 corridor as well as historic sites, federal, state, county, and local public lands, and areas of conservation easements in Dunn. Commercial, manufacturing, and industrial businesses are also located in the study area, primarily in the urban centers.

McFarland has a typical development pattern with a central business district surrounded by residential neighborhoods. New businesses have expanded north and south out of the central business district along US 51, while residential development is bounded to the west by Lake Waubesa and has been expanding to the east and south. Industrial development has been concentrated in McFarland's northwest side. Some of the land use initiatives identified in McFarland's *Comprehensive Plan* call for neighborhood and economic expansion to the east, reinvestment along Lake Waubesa and in residential areas, and implementing plans for revitalization of the downtown area.

Stoughton is considered a "sub-regional" center for shopping and professional services. It has a historic development pattern starting as a river-and-rail-oriented community that expanded along the banks of the Yahara River, the rail corridor, and Main Street (US 51). The downtown area is made up of mixed-use (residential, commercial, office, and institutional) development with general business along US 51 on the west and east sides of Stoughton. Industry is concentrated on the north and south edges of Stoughton, with a small island in the downtown area. As Stoughton expanded, newer development occurred mainly along Stoughton's west edge, as well as the north and southeast. As Stoughton grows outward, efforts are being made to preserve and restore the historic areas within Stoughton's center. Short-term urban growth is planned for all sides of Stoughton, with mid- and long-term growth concentrated on Stoughton's east side.

Oregon's growth is consistent with traditional small Midwestern communities with residential growth centered around a historic downtown with commercial and business uses interspersed throughout. Farmland surrounds Oregon and helps separate it from the Madison metropolitan area. The downtown area is mixed-use, containing many of Oregon's institutional buildings as well as retail, commercial, and residential development. Oregon plans to expand its residential areas primarily to the south and west and plans for mixed-use development on the east side along WIS 138 to just east of the US 14 interchange.

The small rural towns including Albion, Dunkirk, Dunn, Pleasant Springs, and Rutland support mainly agricultural uses with very low-density residential development sparsely located throughout. Agricultural uses include beef, dairy, hogs, corn, tobacco, oats, alfalfa, soybeans, and canning crops.

Dunn has been actively taking steps to preserve its rural character. This includes purchasing development rights, establishing conservation easements, and promoting the sale of land in Dunn to WDNR, The Nature Conservancy, Dane County Parks, or other conservation-oriented organizations. These conservation easements comprise 3,763 acres of land, which had been permanently protected through Dunn's aggressive Purchase of Development Rights program. As of spring 2020, Dunn held conservation easements on 38 properties, representing approximately 13.5 percent of Dunn's land area. When including the conservation efforts of other organizations, approximately 23.5 percent of Dunn's area is under some form of permanent conservation easement or deed restriction. Dunn is also one of three designated Agriculture Enterprise Areas (AEAs) in Dane County. Eligible landowners in designated AEAs can enter into voluntary farmland preservation agreements and collect farmland preservation tax credits.

Dunkirk, Pleasant Springs, and Rutland also have land-use plans that include provisions for preservation of farmland and areas enrolled in the State's Farmland Preservation Program. While Dunn limits residential and industrial development, the other towns are more likely to allow it if the development is controlled, well-planned, and enhances the quality of the town.

Current community populations, expected growth rates, and minority populations are shown in Tables B-1.1 and B-1.2. Dunn's population is larger than other towns along the US 51 corridor, showing that its proximity to Madison has likely influenced growth. However, with Dunn's current land use plans and Purchase of Development Rights program, Dunn is expected to experience a negative future growth rate. Albion and Dunkirk are the farthest from the Metro Madison area, have the smallest populations, and are expected to have low to negative growth rates.

Community/ Neighborhood Name	2010 Households	2010 Community Population	2015 Population Estimate	2030 Projected Population	2040 Projected Population	Population Change 2010 to 2030	Population Change 2010 to 2040
Albion	747	1,951	1,965	1,980	1,935	1.5%	-0.8%
Dunkirk	785	1,945	1,945	1,870	1,780	-3.9%	-8.5%
Dunn	2,062	4,931	4,956	4,765	4,525	-3.4%	-8.2%
McFarland	3,079	7,808	7,946	9,335	9,895	19.6%	26.7%
Oregon	3,589	9,231	9,575	11,620	12,580	25.9%	36.3%
Pleasant Springs	1,193	3,154	3,217	3,400	3,435	7.8%	8.9%
Rutland	760	1,966	1,995	2,175	2,220	10.6%	12.9%
Stoughton	5,133	12,611	12,698	13,800	14,080	9.4%	11.6%
Dane County, Wisconsin	203,750	488,073	508,379	577,300	606,620	18.3%	24.3%

U.S. Census Bureau, 2010 Census Data
Wisconsin Department of Administration, Demographic Services Center: Official Final Estimates, January 1, 2015 and MCD and Municipal Population Projections 2010 to 2040, Final Release December 10, 2013.

Table B-1.1 Populations and Households (number)

Table B-1.2 shows the breakdown of minorities in each community.

Community/ Neighborhood Name	White Alone	Black Alone	Asian Alone	Native American Alone	Pacific Islander Alone	Other Race Alone	Two or More Races
Albion	1,972	2	8	0	0	0	9
Dunkirk	2,175	11	7	0	0	0	12
Dunn	4,961	75	3	0	0	46	110
McFarland	7,837	164	88	0	0	25	121
Oregon	9,216	517	21	41	0	81	157
Pleasant Springs	3,200	18	64	9	0	0	49
Rutland	1,860	3	19	6	2	26	23
Stoughton	12,058	455	122	18	0	50	355
Dane County, Wisconsin	438,930	26,715	29,588	1,420	198	10,296	15,690

U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

Table B-1.2 Populations by Race (number)

2. **Identify and discuss existing modes of transportation and their importance within the community or Neighborhood:**
Throughout the study area, motorized personal vehicles (cars, light trucks, and motorcycles) are the primary mode of transportation. A small percentage of area residents use bicycles as a regular mode of transportation in Stoughton, but bicycle facilities are not continuous or extensive in the study area. School bus services provide transportation to the area's school-age residents. There is no Madison Metro transit currently serving the communities along the study corridor, and residents in nearly all communities expressed interest in shared-use (bicycle and pedestrian) paths.

Albion has a bike plan that calls for a future trail crossing of US 51 at County W. Albion has stated that an at-grade crossing will be acceptable.

3. **Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:**
It is anticipated that the major mode of transportation would remain the motorized personal vehicle (cars, light trucks, and motorcycles). Proposed improvements to bicycle and pedestrian facilities may increase the use of walking and bicycles for transportation, but at the same time, a reconstructed roadway, new pavement, improved access to US 51, and intersection improvements would promote the use of motorized personal vehicles. No changes to school bus routes would be anticipated as a result of the proposed action and the reconstructed roadway with new pavement, improved access to US 51, and intersection improvements would benefit the efficiency of the area's school bus transportation system.

Traffic projections show that traffic congestion would continue to increase on US 51. As projected traffic volumes increase, more people may choose to carpool or work from home, walk, or use mass transit, assuming it is available in the future. The proposed action would provide bicycle accommodations on paved shoulders along rural portions of US 51. In urban areas, bicycle accommodations would be provided where possible and continuous sidewalk accommodations would be provided. The year 2045 projected levels of traffic during peak commuting hours may make other modes of transportation more attractive for commuting and for shorter trips within the community.

4. **Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:**
Growth trends and forecasts would likely continue as predicted and development would likely continue as planned by cities, villages, and towns. Compared to the No Build Alternative, the rate of future growth and development may be slightly accelerated with the proposed action as a result of access and safety improvements along the US 51 corridor. Similarly, the location of planned development may be altered slightly to more directly correspond to intersection improvements (e.g., roundabouts or traffic signals). The WisDOT Indirect Effects Pre-Screening Worksheet is provided as Appendix F.

5. **Address any changes to emergency or other public services during and after construction of the proposed project:**
Before and during construction, WisDOT will coordinate with emergency and other service providers to ensure access. Access will be maintained to rural properties and a Traffic Management Plan and construction staging will accommodate these services. Partial or full detours of through traffic will be used for construction. While some delays or increased response times may result because of construction, efforts will be made to ensure that any delays or increased response times are not detrimental to public safety.

Postconstruction response times would generally be improved in most areas because of the improved and reconstructed roadway and improved intersections and overall safety. Some areas could have increased response times because of access changes and turning-movement restrictions, but all areas affected by the project would still be within acceptable response times.

6. **Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:**
Access changes are related to specific intersection improvements, turning restrictions and the removal of driveways.

At Dyreson Road, the connection to US 51 on the south side would be converted to a cul-de-sac and direct access to US 51 would be removed. The US 51 connection to Dyreson Road on the north would be realigned

to provide a 90-degree intersection angle. This section of Dyreson Road is a Wisconsin Rustic Road and no changes in status is anticipated as a result of Alternative H.[1] Access to the properties south of US 51 on Dyreson Road would occur through the proposed US 51/County B/AB roundabout and the Dyreson Road and County B intersection.

Access changes would also affect several private driveways that currently have full access where motorists can turn from the driveway in either direction onto US 51. With the proposed action, there are locations where a private access point is not aligned with a proposed median opening location. Property owners would experience inconvenience for themselves and visitors to these properties, because of the frequency of side-road intersections, the distance to travel to the next intersection or median opening where a U-turn maneuver can be made is typically less than 0.5 mile and would not greatly impact travel times for emergency service access to these properties. The number of driveways impacted by access changes are described as follows:

- On US 51 between WIS 138 (west) and County B (east) there are three driveways with access to the proposed 4-lane roadway. These driveways would be restricted to right-in/right-out access only.
- On US 51 between County B (east) and McFarland there are an estimated five driveways with existing full access to US 51 that would be converted to right-in/right-out access only.
- North of Exchange Street, in McFarland, there are an estimated six driveways with existing direct access to US 51 that would be converted to right-in/right-out access only.
- The entrance to Babcock Park boat launch parking lot south of the Yahara River would have right-in/right-out/left-in access only. Northbound exiting vehicles would need to drive south to the proposed Exchange Street roundabout to make a U-turn. This would add a total of 0.6 mile of indirection for these vehicles but the revised access should improve safety for the recreational vehicles and through traffic. The location of the existing Babcock Park overflow parking lot access on the east side of US 51 would be shifted approximately 275 feet south. The new access location would have right-in/right-out access and vehicles leaving the lot would be able to enter the northbound left-turn lane for the Babcock Park boat launch parking lot.

There are also physical changes anticipated to properties as part of the proposed action.

- At Mahoney Road there are four affected properties fronting onto the west side of US 51 with direct access to the existing highway. A new town road would be constructed along the back (west) side of the properties and connect to Mahoney Road. The existing driveways to US 51 for these properties would be removed and access to US 51 would be provided by the new town road and the Mahoney Road intersection.
- At Tower Road the west access would be rerouted and connect to the proposed Exchange Street roundabout. All properties that access US 51 at Tower Road west of US 51 would be routed to the Exchange Street roundabout. Apple Blossom Lane's direct access to US 51 would also be removed and connected to the rerouted Tower Road.
- Bible Camp Road would be restricted to right-in/right-out/left-in access only. Northbound vehicles would need to drive south to the proposed Exchange Street roundabout to make a U-turn. This would add a total of about 0.4 mile of indirection.

7. **Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood**:
A retaining wall would be constructed adjacent to Colladay Point Park. The park is located on the east side of US 51 between the US 51 and Colladay Point Drive intersection and the US 51 and Schneider Drive intersection. The wall is needed to avoid impacts to the park, a resource protected by Section 4(f) [see Section 4(f) factor Sheet for additional information]. The wall would be up to 10 feet tall and approximately 350 feet long. Beam guard would be included along US 51 at the wall. Without the wall, the park would be impacted by roadway slopes that would require approximately 0.5 acre of R/W. With the wall, there would be no R/W impacts and the function of the park would not be affected.

[1] The Wisconsin legislature established the Rustic Roads program in 1973 to help citizens and local units of government preserve what remains of Wisconsin's scenic, lightly traveled country roads. http://wisconsindot.gov/Pages/travel/road/rustic-roads/default.aspx

Other community facilities in and near Stoughton, located along US 51, that would not be affected by the proposed alternatives include the Stoughton library, a food pantry, an opera house, a senior center, a youth center, a historical society, a Norwegian Heritage Center, and the Stoughton Wellness and Athletic Center.

In McFarland, the proposed action would affect Dane County's Babcock Park on both the east and west sides of US 51. Babcock Park qualifies for protection under Section 4(f) [see Section 4(f) factor Sheet for additional information]. Some strip R/W acquisition would be needed and mitigation measures have been negotiated with Dane County Parks. Mitigation would include new and improved paths and sidewalk on the east and west sides of US 51, a path on the east side of US 51 between the overflow parking lot and the south bank of the Yahara River, tree replacement, retaining walls, pedestrian crossing improvements, park signage, a screening and/or barrier wall along the west side of US 51 adjacent to the campground, and shifting the overflow parking lot access south. The improvements are expected to benefit the park and its users. The function of the park would not be affected.

Other community facilities in McFarland that are located close to US 51 and would not be affected include the Municipal Center with senior services, the McFarland library, schools, athletic fields and parks, and a youth center.

8. Identify and discuss factors that residents have indicated to be important or controversial:
Overall, area residents that provided comments after the August 26, 2015 PIM were in favor of the proposed action. Support for Alternative H (Hybrid) received the highest number of comments (15) with Alternative A (Low Build) receiving nine support comments. Alternative B (4-lane Expansion) had seven support comments but also received six comments opposing it. There were ten comments that specifically opposed the Stoughton Bypass, the very controversial portion of Alternative B that provided a 4-lane bypass around the north and east sides of Stoughton.

An issue that was voiced by residents was the preference for the type of intersection control (roundabouts or traffic signals) at specific intersections including Hoel Avenue, WIS 138 (west), County B (east), County B/AB, and Exchange Street. An ICE report was prepared for each of the locations noted and WisDOT selected a roundabout as the appropriate control type in each location based on traffic operations, safety, and impacts.

A total of 37 written comment sheets, letters, or emails were received as a result of the September 2019 newsletter and September 26, 2019 PIM that presented the preferred alternative. The highest number of comments received were for the following issues:

- Requesting a left-turn arrow at the WIS 138 and US 51 temporary traffic signal.
- Supporting a roundabout at County B (east).
- Opposing the roundabout at US 51 and WIS 138.
- Corridor is dangerous.

A total of 53 comment sheets, emails, or phone messages were received following the October 6, 2020 virtual PIM that presented design updates to the preferred alternative. The highest number of comments received were for the following issues:

- In support of various proposed roundabout improvements.
- Requesting additional bicycle/pedestrian improvements.
- Supporting Alternative H or various improvements that are included in Alternative H.
- Requesting additional intersection improvements.

Comments, and responses to comments, are noted on Basic Sheet 3, in Section 11.

9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.
Existing aesthetic features in Stoughton and McFarland impacted by the proposed action such as, but not limited to, decorative crosswalks, colored sidewalk panels, and lighting would be replaced in kind. The project's D for C specifies that these types of features located in Stoughton's historic districts would be replaced in kind.

10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 17 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 17 and attach the Conceptual Stage Relocation Plan to the environmental document:

a. ☐ None identified.
b. ☐ No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
c. ☒ Occupied residential building(s) will be acquired. Provide number and description of buildings, e.g., single family homes, apartment buildings, condominiums, duplexes, etc.

The proposed action will result in acquisition of two single-family residential buildings. Relocations are shown on the maps in Appendix E.

Anticipated number of households that will be relocated from the occupied residential buildings identified in item 10c, above:

Total Number of Households to be Relocated.
2

(Note that this number may be greater than the number shown in 10c) above because an occupied apartment building may have many households.)

a. Number by Ownership

Number of Households Living in Owner Occupied Building	Number of Households Living in Rented Quarters
2	0

b. Number of households to be relocated that have.

1 Bedroom	2 Bedroom	3 Bedroom	4 or More Bedrooms
0	0	0	2

c. Number of relocated households by type and price range of dwelling.

Number of Single Family Dwelling. 0	Price Range: $100,000 to $200,000
Number of Single Family Dwelling. 2	Price Range: $200,000 to $300,000
Number of Single Family Dwelling. 0	Price Range: $400,000 to $500,000
Number of Apartment 0	Price Range

11. Describe the relocation potential in the community:

a. Number of Available Dwellings

1 Bedroom	2 Bedrooms	3 Bedrooms	4 or More Bedrooms
Not Determined	21	89	105

b. Number of Available and Comparable Dwellings by Location

215 within the McFarland and Stoughton area and surrounding townships	within
within	within

c. Number of Available and Comparable Dwellings by Type and Price. (Include dwellings in price ranges comparable to those being dislocated, if any.)

Single Family Dwellings	Price Range
23	$100,000 to $200,000
84	$200,000 to $350,000
57	$350,000 to $500,000
51	> $500,000
Multi-Family Dwellings	
Apartments	

12. Identify all the sources of information used to obtain the data in item 12:

☒ WisDOT Real Estate Conceptual Stage Relocation Plan
☐ Newspaper Listing(s)
☒ Multiple Listing Service (MLS)
☒ Other–Identify Zillow and Trulia websites.

The CSRP market analysis was completed in September 2019. The CSRP is dated October 2019 and is provided as Appendix I.

13. Indicate the number of households to be relocated that have the following special characteristics:

☒ None identified.
☐ Yes–_____ total households to be relocated. Complete table below

Special Characteristics	**Number of Households with Individuals with Special Characteristics**
Elderly	
Disabled	
Low income	
Minority	
Household of large family (5 or more)	
Not Known	
No special characteristics	

14. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24:

☒ Residential acquisitions and relocations will be completed in accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended." In addition to providing for payment of "Just Compensation" for property acquired, additional benefits are available to eligible displaced persons required to relocate from their residence. Some available benefits include relocation advisory services, reimbursement of moving expenses, replacement housing payments, and down payment assistance. In compliance with State law, no person would be displaced unless a comparable replacement dwelling would be provided. Federal law also requires that decent, safe, and sanitary replacement dwelling must be made available before any residential displacement can occur.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners will be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired will be inspected by one or more professional appraisers. The property owner will be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Based on the appraisal(s) made, the value of the property will be determined, and that amount offered to the owner.

☐ Identify other relocation assistance requirements not identified above.

15. **Identify any difficulties or unusual conditions for relocating households displaced by the proposed action:**
Relocations are necessary with the proposed action. The primary impact would be the relocation of families displaced from the acquired dwellings. Preliminary indications are that there should be an adequate supply of available housing in the project area. No problems are foreseen in providing any of these individuals or families with relocation options. Should special relocation advisory services be required, or an unusual problem arises, WisDOT will have relocation personnel to provide the necessary services.

16. **Indicate whether Special Relocation Assistance Service will be needed. Describe any special services or housing programs needed to remedy identified difficulties or unusual conditions noted in item #13 above:**

☒ None identified
☐ Yes–Describe services that will be required

17. **Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected:**
No additional measures were identified.

ENVIRONMENTAL JUSTICE EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-4

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None Identified	

1. Identify and give a brief description of the populations covered under Executive Order 12898 (EO 12898). Include the relative size of the populations and their pertinent demographic characteristics: (Check all that apply.)

Population Groups	Low Income	Elderly	Disabled
☒ Black (having origins in any of the black racial groups of Africa) Describe:	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race) Describe:	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ Asian American (origins in any of the original peoples of the Far East, SE Asia, the Indian subcontinent, or the Pacific Islands) Describe:	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ American Indian and Alaska Native (having origins in any of the original people of North American and who maintains cultural identification through tribal affiliation or community recognition) Describe:	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ White and any combination of the above. Describe:	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ Non-minority low-income population Describe:		Yes ☐ No ☐	Yes ☐ No ☐

Data collected from the U.S. Census Bureau indicates there are low-income and minority populations along the US 51 project corridor. The data collected does not identify if the low-income populations are minority, non-minority, or both.

Low Income

Department of Health and Human Service Poverty Guidelines are typically used for evaluation of low-income populations. For the US 51 corridor, U.S. Census Bureau data was the best available data. A map identifying the percentage of families below the poverty level is provided in Appendix M. The map used U.S. Census Bureau, 2013-2017 American Community Survey, block group level data and compares families in the study area to the percentage of families below the poverty level in Dane County. Low-income populations are shown on the maps provided in Appendix M.

Minority

U.S. Census Bureau, 2013-2017 American Community Survey, block group level data, minority percentages for the study area were compared to Dane County percentages. Minority populations exceeding Dane County percentages are shown on the maps provided in Appendix M.

2. How was information on the proposed action communicated to populations covered by Executive Order 12898. Check all that apply:

- ☐ Advertisements
- ☒ Newsletters
- ☐ Utility Bill Inserts
- ☐ Public Service Announcements
- ☐ Key Persons
- ☐ Brochures
- ☒ Notices
- ☐ E-mails
- ☐ Direct Mailings
- ☒ Other, identify community website notices and WisDOT website notices.

3. How was input from populations covered by EO 12898 obtained? Check all that apply:

- ☐ Mailed Surveys
- ☐ Door-to-door interviews
- ☐ Focus Group Research
- ☐ Public Hearings
- ☐ Other, identify _____
- ☐ Targeted Small Group Information Meetings
- ☐ Targeted Workshop/conferences
- ☒ Public Meetings
- ☐ Key Person Interviews

4. Indicate any special accommodations made to encourage participation from populations covered by EO 12898. Check all that apply:

- ☒ Interpreters
- ☒ Accessibility for Elderly & Disabled
- ☐ Child Care Provided
- ☐ Other
- ☐ Listening Aids
- ☐ Transportation Provided
- ☒ Sign Language

5. If there is a project advisory committee, identify and describe committee members from populations covered by EO 12898

- ☒ None identified
- ☐ Yes–Check all that apply and describe below:

  - ☐ Black
  - ☐ Hispanic
  - ☐ Asian-American
  - ☐ American Indian or Alaska Native
  - ☐ White and any combination of the above
  - ☐ Non-minority low income

  Describe: _____

6. As a result of public involvement and inter-agency coordination, identify and describe issues of concern or controversy to populations covered by EO 12898:

A. Economic Development and Business

- ☒ No issues of concern or controversy identified.
- ☐ Yes –Issues of concern or controversy identified.

1. List effects on businesses and populations covered by EO 12898:

   - ☐ None identified.
   - ☐ Yes.

     List and discuss–_____

Population Groups	Number of Businesses **Created** That Will:		Number of Businesses **Displaced** That:	
	Employ	Serve	Employ	Serve
Elderly				
Disabled				
Low income				
Minority				

2. List other effects.

   - ☐ None identified.
   - ☐ Yes

     List and discuss– _____

B. Agriculture

☒ No issues of concern or controversy identified.
☐ Yes–Issues of concern or controversy identified.

1. List effects on agricultural operations owned by members of populations covered by EO 12898.

   ☐ None identified.
   ☐ Yes
   List and discuss–_____

2. List effects on agricultural operations which employ members of populations covered by EO 12898, including migrant workers

   ☐ None identified.
   ☐ Yes
   List and discuss–_____

3. List other effects on members of populations covered by EO 12898:

   ☐ None identified.
   ☐ Yes
   List and discuss–_____

C. Community/Residential

☒ No issues of concern or controversy identified.
☐ Yes–Issues of concern or controversy identified.
List and discuss–_____

1. List relocation effects on households covered by EO 12898:

   ☒ None identified.
   ☐ Yes
   List and discuss–_____

Population Groups	Number of Households Relocated
Elderly	
Disabled	
Low income	
Minority	

2. List other effects on members of populations covered by EO 12898.

   ☒ None identified.
   ☐ Yes
   List and discuss–_____

D. Other

☒ No issues of concern or controversy identified.
☐ Issues of concern or controversy identified.
List and discuss–_____

7. Indicate whether effects on populations covered by EO 12898 are beneficial or adverse:

A. Beneficial effects.

☒ Describe effects on populations and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to enhance beneficial effects. Describe methods used to determine beneficial effects resulting from the proposed project. (If only beneficial effects, process is complete.)

The proposed action would result in improved safety, fewer roadway deficiencies, replacement of the existing poor pavement, and addition of bicycle and pedestrian facilities. These benefits would be realized by all populations in the vicinity of the US 51 project corridor, including those covered by EO 12898. The improvements may have some additional benefit to EO 12898 populations that rely more heavily on nonmotorized transportation such as bicycles or walking.

The project's potential cumulative effects would apply equally to both EO 12898 populations as well as non-EO 12898 populations. Cumulative effects of the US 51 project are not anticipated to be substantial, but the project improvements combined with other nearby transportation and infrastructure projects may result in both beneficial and adverse cumulative effects. Beneficial effects resulting from general improvements to area infrastructure and transportation facilities might include the area becoming generally more attractive to desirable business and residential developments. This greater appeal could enable the area's desired redevelopment in accordance with planned land uses and result in benefiting the area's general economy.

B. Adverse effect.

☒ 1. Adverse Effects are proportional or disproportionately low. Identified adverse effects that are proportionate or disproportionately low to those experienced by the general population.

Describe effects on populations and discuss whether they are direct, indirect or cumulative. Describe methods used to determine adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate adverse effects. (If only beneficial or proportional or disproportionately low effects, process is complete.)

Direct adverse effects on the local residents, consumers, and businesses include some reduced access to US 51 along the project corridor, removal of some on-street parking in downtown Stoughton, and the loss of one parking space from a business parking lot in McFarland. There are no business relocations and most direct effects and residential relocations were avoided by design modifications. Other direct adverse effects of the US 51 project are approximately 8 acres of wetland impact and approximately 48 acres of agricultural land impact.

Indirect effects screening determined that the project would not have the likelihood to result in significant indirect effects as defined by NEPA.

Adverse effects resulting from general improvements to area infrastructure and transportation facilities might include the area becoming generally more attractive to desirable business and residential developments. This greater appeal could enable the area's desired redevelopment in accordance with planned land uses and result in wetland and agricultural land impacts that would contribute to cumulative wetland loss in the Yahara River watershed and agricultural land loss in Dane County.

☐ 2. Adverse Effects are disproportionately high. A disproportionately high and adverse effect means an adverse effect that:

a.) is predominately borne by populations covered by EO 12898; or
b.) will be suffered by populations covered by EO 12898 and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by population not covered by EO 12898.

Describe disproportionately high and adverse effects on populations covered by EO 12898 and discuss whether they are direct, indirect, or cumulative. Describe methods used to determine

adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate disproportionately high and adverse effects or enhance beneficial effects.

8. Will the alternative be carried through final design even with disproportionately high and adverse effects on populations covered by EO 12898?

A. ☐ No, the alternative will not be carried out because of disproportionately high and adverse effects on populations covered by EO 12898.

1. ☐ Another alternative with less severe effects on populations covered by EO 12898 can meet the purpose and need of the proposed alternative and is practicable.
2. ☐ Other.
   Describe. _____

B. ☐ Yes, the alternative will be carried out with the mitigation of disproportionately high and adverse effects on populations covered by EO 12898.

1. ☐ All disproportionate effects will be mitigated by the following measures.
   List and discuss measures:
2. ☐ The alternative will be carried through final design without fully mitigating disproportionately high and adverse effects. A substantial need for the alternative exists based on the overall public interest. Alternatives that would have less adverse effects on populations covered by EO 12898 have either:

   a) ☐ Adverse social, economic, environmental, or human health impacts that are more severe.
   b) ☐ Would involve increased costs of an extraordinary magnitude.

HISTORIC RESOURCES EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-5

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

Section 106 Form or other documentation, with all necessary approvals, must be attached to the Environmental Document for all projects.

The Section 106 form and associated documentation is provided as Appendix K.

1 Parties contacted:

PARTIES CONTACTED	Date Contacted	Comments Received		
		No	**Yes**	**Check if Attached**
American Indian Tribes	July 8, 2011, invitation to attend Cooperating and Participating Agency Meeting as part of the US 51 DEIS (ID 5845-06-02).	No		☐
	September 16, 2013 Study Status Update Letter as part of the US 51 DEIS (ID 5845-06-02).	No		☐
	July 22, 2015 Study Status Update Letter	No		☐
	August 14, 2019 Study Status Update Letter	No		☐
SHPO	A Section 106 submittal was sent to SHPO in October 2013. That 106 submittal was for the US 51 DEIS (ID 5845-06-02) and included the Section 106 form, Architecture History Survey Form Reports, archaeological field survey, nine DOEs, and archaeological Phase I and Phase II reports for the study area.		Yes	☒
	A second Section 106 submittal was sent to SHPO in October 2015. This submittal was for the US 51 EA (ID 5845-06-03) and included a new Section 106 form, an archaeological investigation report, and one DOE.			
	The third Section 106 submittal was sent to SHPO in January 2020. That submittal was for the US 51 EA (ID 5845-06-03) and included an amended Section 106 form, an Architecture/History Survey Update, an Archaeological Survey Field Report, and an Archaeological Literature and Records Review.	No		☐
Property Owners	Property owners were contacted before completion of archaeological and historic field surveys. Some property owners provided general, verbal comments about the historic features of their property.		Yes	☐
Dane County Historical Society	Several attempted contacts June 2008 through August 2019.	No		☐

2a. Property Name: Maple Grove School

3a. Location: US 51 and Maple Grove Road

4a. Use: Vacant School House

5a. Property type:

- ☐ Bridge
- ☒ Building
- ☐ Historic District
- ☐ Other: _____

6a. Property Designations:

- ☐ National Historic Landmark (NHL)
- ☐ National Register of Historic Places (NRHP)
- ☐ State Register of Historic Places
- ☐ Local Registry
- ☐ Tribal Registry

Property is listed on the Wisconsin Architecture and History Inventory.

7a. A Determination of Eligibility (DOE) has been prepared:

- ☐ No–Property is already on NRHP or NHL.
- ☐ Yes–DOE prepared.
- ☒ Other: DOE completed in 1988.

8a. Describe the significance of the structures and/or buildings:
According to a determination of eligibility completed in 1988, the Maple Grove School was previously determined eligible "under Criterion A, because it is a fine and intact example of a rural one-room school, a property type that represents an important era in rural education in the United States." The DOE form is on file at SHPO.

The Wisconsin Historic Preservation Database indicates this building was last surveyed in 1989. Since then, the basement windows along the north elevation have been boarded up but no other changes are visible. The Wisconsin Architecture and History Inventory (AHI) record was updated with the new survey date and changed appearance.

9a. In compliance with the requirements of Section 106, of the National Historic Preservation Act, the proposed project's effects on the historic property, (e.g., structure or building) have been evaluated in the following report, a copy of which is:

- ☐ In the project file, or
- ☒ Attached to this document:
  - ☐ Documentation for determination of no historic properties affected (Reported on the Section 106 Review Form).
  - ☒ Documentation for determination of no adverse or conditional no adverse effect to historic properties.
  - ☐ Documentation for Consultation about adverse effect(s). A Memorandum of Agreement has been completed.
    - ☐ No. Consultation about effects is continuing.
    - ☐ Yes, a copy of the Memorandum of Agreement (MOA) is attached to this document. Summarize MOA stipulations below:

10a. Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?

- ☒ No
  - ☐ Project is not federally funded.
  - ☒ No R/W or Permanent Limited Easements will be acquired from the property and the project will not substantially impair the characteristics that qualify the property for the NRHP.
  - ☐ R/W will be acquired from the NRHP property but a *de minimus* finding has been proposed.
  - ☐ Other–Explain:
- ☐ Yes–Complete Factor Sheet B-8, Section 4(f) and 6(f) or other Unique Areas.

2b. Property Name: Five Historic Districts

3b. Location: US 51, Downtown Stoughton

4b. Use: Residential and commercial structures

5b. Property type:

- ☐ Bridge
- ☐ Building
- ☒ Historic District
- ☐ Other: _____

6b. Property Designations:

- ☐ National Historic Landmark (NHL)
- ☒ National Register of Historic Places (NRHP)
- ☐ State Register of Historic Places
- ☐ Local Registry
- ☐ Tribal Registry

7b. A Determination of Eligibility (DOE) has been prepared:

- ☒ No–Property is already on NRHP or NHL. (Northwest Side Historic District, Southwest Side Historic District, Main Street Commercial Historic District, and East Side Historic District)
- ☐ Yes–DOE prepared.
- ☒ Other: DOE completed previously (Depot Hill Historic District)

8b. Describe the significance of the structures and/or buildings:

Northwest Side Historic District–Roughly bounded by US 51 (Main Street) to the south, the Yahara River and Grant Street to the east, Jackson, Roy, and Taft Streets to the north, and Van Buren Street to the west; the Northwest Side Historic District was listed in the NRHP in 1998 under Criterion C: Architecture as a relatively intact concentration of historic houses constructed between 1850 and 1940.

Southwest Side Historic District–Roughly bounded by Oak Street to the south, South Page Street to the east, West Main Street to the north, and South Monroe Street to the west; the Southwest Side Historic District was listed in the NRHP in 1998 under Criterion C: Architecture as a concentration of significant examples of popular nineteenth- and early-twentieth-century architectural styles.

Main Street Commercial Historic District–Located along Main Street between the Yahara River and Forest Street, the Main Street Commercial Historic District was listed in the NRHP in 1982 under Criterion C: Architecture as a cohesive collection of buildings comprising Stoughton's historic commercial center.

East Side Historic District–Roughly bounded by Vernon Street to the south, South and North Henry Streets to the east, Ridge Street to the north, and South Academy Street to the west; the East Side Historic District was listed in the NRHP in 1997 under Criterion C: Architecture as a collection of houses constructed between 1880 and 1940 that represent popular nineteenth- and early-twentieth-century architectural styles.

Depot Hill Historic District–Located along East Main Street between South 5th Street and the Chicago, Milwaukee, St. Paul & Pacific railroad tracks; the Depot Hill Historic District was determined eligible for listing in the NRHP in 1998 under Criterion A: History for its association with history of industry and transportation in Stoughton in the late nineteenth and early twentieth centuries.

9b. In compliance with the requirements of Section 106, of the National Historic Preservation Act, the proposed project's effects on the historic property, (e.g., structure or building) have been evaluated in the following report, a copy of which is:

☐ In the project file, or
☒ Attached to this document:

- ☐ Documentation for determination of no historic properties affected (Reported on the Section 106 Review Form).
- ☒ Documentation for determination of no adverse or conditional no adverse effect to historic properties.
- ☐ Documentation for Consultation about adverse effect(s). A Memorandum of Agreement has been completed.
  - ☐ No. Consultation about effects is continuing.
  - ☐ Yes, a copy of the MOA is attached to this document. Summarize MOA stipulations below:

The proposed action would require no R/W acquisition from the five historic districts in downtown Stoughton. To avoid impacting the historic districts, there are two horizontal curves, one vertical curve, and one grade that will not be designed to meet current WisDOT FDM standards. These design criteria will be discussed in the Design Study Report completed during final design.

10b. Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?

☒ No

- ☐ Project is not federally funded.
- ☒ No R/W or Permanent Limited Easements will be acquired from the property and the project will not substantially impair the characteristics that qualify the property for the NRHP.
- ☐ R/W will be acquired from the NRHP property but a *de minimus* finding has been proposed.
- ☐ Other–Explain:

☐ Yes–Complete Factor Sheet B-8, Section 4(f) and 6(f) or other Unique Areas.

2c. Property Name: Olson-Hemsing Farmstead

3c. Location: 2471 US 51

4c. Use: Residence/Farm

5c. Property type:

- ☐ Bridge
- ☐ Building
- ☐ Historic District
- ☒ Other Farmstead

6c. Property Designations:

- ☐ National Historic Landmark (NHL)
- ☐ National Register of Historic Places (NRHP)
- ☐ State Register of Historic Places
- ☐ Local Registry
- ☐ Tribal Registry

7c. A Determination of Eligibility (DOE) has been prepared:

- ☐ No–Property is already on NRHP or NHL.
- ☒ Yes–DOE prepared.
- ☐ Other: _____

8c Describe the significance of the structures and/or buildings:

The Olson-Hemsing Farmstead contains 12 historic resources including a house, a tobacco barn, a poultry house, a dairy barn complex, a corn crib, a garage, a pump house, a small animal barn, a concrete silo, two grain bins, and a machine shed. The property's period of significance is c.1905 to c.1970, the earliest and latest contributing building construction dates. Overall, the site is in fair condition and retains a relatively high degree of integrity. Because the Olson-Hemsing Farmstead is a good local representative of the typical evolution of an early twentieth-century tobacco farm to a mid-twentieth-century dairy farm, the property is considered eligible for listing under Criterion C: Architecture as a distinct property type.

Under Criterion A: History, no information was found to suggest that the farming practices at the Olson-Hemsing Farmstead are of exceptional significance to the growth or development of tobacco farming or stock raising and dairying in southeastern Wisconsin. Although Tollef Olson was a Norwegian farmer, the property is not eligible for ethnic associations because only one building remains from Olson's lifetime and the farmstead is not representative of any specific plan or design associated with Norwegian farming practices. No evidence was found to suggest eligibility under Criterion B: Significant Person.

9c. In compliance with the requirements of Section 106, of the National Historic Preservation Act, the proposed project's effects on the historic property, (e.g., structure or building) have been evaluated in the following report, a copy of which is:

- ☐ In the project file, or
- ☒ Attached to this document:
  - ☐ Documentation for determination of no historic properties affected (Reported on the Section 106 Review Form).
  - ☒ Documentation for determination of no adverse or conditional no adverse effect to historic properties.
  - ☐ Documentation for Consultation about adverse effect(s). A Memorandum of Agreement has been completed.
    - ☐ No. Consultation about effects is continuing.
    - ☐ Yes, a copy of the MOA is attached to this document. Summarize MOA stipulations below:

The proposed action would require no fee R/W acquisition from the Olson-Hemsing Farmstead but would require a small amount of TLE. FHWA and WisDOT concurred with a preliminary design justification between Mahoney Road and Dyreson Road that would allow a 4 percent roadway profile grade to avoid the historic resource and the WDNR's Lower Mud Lake Fishery property. The 4-percent grade matches the existing grade. A 3-percent grade meets design standards, but impacts the historic property and the WDNR property. The design justification will be formally requested and reviewed for approval during final design.

10c. Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?

☒ No

- ☐ Project is not federally funded.
- ☒ No R/W or Permanent Limited Easements will be acquired from the property and the project will not substantially impair the characteristics that qualify the property for the NRHP.
- ☐ R/W will be acquired from the NRHP property but a *de minimus* finding has been proposed.
- ☐ Other–Explain:

☐ Yes–Complete Factor Sheet B-8, Section 4(f) and 6(f) or other Unique Areas.

ARCHAEOLOGICAL SITES EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-6

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

If there are any effects to an archaeological site and any American Indian Tribes express interest in the project, Factor Sheet B-7, the Cultural Resources Tribal Issues Factor Sheet must also be completed.

Section 106 Form or other documentation, with all necessary approvals, must be attached to the Environmental Document for all projects.

The Ho-Chunk Nation participated in the February 17, 2016 Section 106 consultation meeting. Prior to that consultation meeting, no American Indian Tribes expressed an interest in the project and Factor Sheet B-7 was not completed. The Section 106 Form and associated documentation are provided in Appendix K.

1. Parties Contacted:

Parties Contacted	Date Contacted	Comments Received		
		No	Yes	Check if Attached
Native American Tribes	October 10, 2008, invitation to be Participating Agencies.	No		☐
	July 8, 2011, invitation to Cooperating and Participating Agency Meeting during the US 51 DEIS (ID 5845-06-02).	No		☐
	September 16, 2013, July 22, 2015, and August 13, 2019, Study Status Update Letters.	No		☐
Ho-Chunk Nation	May 12, 2011, email notification of Phase II Archaeological Investigations. Email response from Ho-Chunk Nation indicated no interest in observing Phase II investigations.		Yes	☒
	The Ho-Chunk Nation participated in the Section 106 consultation meeting on February 17, 2016 and had the following comments: The Ho-Chunk Nation may coordinate with property owners to assist with reburying of any artifacts found on the properties. The Ho-Chunk Nation will sign the MOA as a concurring party. The Ho-Chunk Nation expressed an interest in visiting a few of the identified burial sites. The Ho-Chunk Nation requested property owner information for 47DA0105 C.M. Colladay 1 Mound Site, 47DA0480 Bird Effigy, and 47DA0107 Barber Campsite.		Yes	☐

Parties Contacted	Date Contacted	Comments Received		
		No	Yes	Check if Attached
SHPO	The first Section 106 submittal was sent to SHPO in October 2013. That 106 submittal was for the US 51 DEIS (ID 5845-06-02) and included the Section 106 form, Architecture History Survey Form Reports, archaeological field survey, nine DOEs, and archaeological Phase I and Phase II reports for the study area. The second Section 106 submittal was sent to SHPO in October 2015. That submittal was for the US 51 EA (ID 5845-06-03) and included an amended Section 106 form, an archaeological investigation report, and one DOE. The third Section 106 submittal was sent to SHPO in January 2020. That submittal was for the US 51 EA (ID 5845-06-03) and included an amended Section 106 form, an Architecture/History Survey Update, an Archaeological Survey Field Report, and an Archaeological Literature and Records Review.		Yes	☒

2. Property Designations:

☐ National Historic Landmark
☐ National Register of Historic Places (NRHP)
☐ State Register of Historic Places
☐ Local Registry
☐ Tribal Registry

3. Sites Identified by record search or Phase I survey. Attach map to appendices depicting site(s)' approximate location within alternative:
Investigations identified 23 archaeological sites within or adjacent to the footprint of the proposed action (Alternative H). No further evaluation was recommended at 12 sites because they are being avoided or lack the integrity and material necessary to be eligible for listing on the NRHP. The remaining 11 sites that required further evaluation are listed below. See Appendix K for Section 106 documentation.

Site #	Site Name	Description and Site Information (e.g., historic, prehistoric, village, campsite, etc.)	Site Recommended for Phase II Evaluation? Y/N	Site Avoided? Y/N
47DA0105	Colladay Mound	Catalogued mound site.	Phase II completed. Potentially eligible.	Yes Monitoring recommended.
47DA0106	Thelma Barber	Uncatalogued mound site; Campsite or village; lithic scatter. Late Woodland; Intermediate Prehistoric.	Phase II completed. Site not eligible.	No Monitoring recommended.
47DA0107	Barber Campsite	Lithic scatter, Intermediate Prehistoric	Phase II completed. Potentially eligible.	No Data Recovery Required.
47DA0108	Rock Elm Park	Campsite or village; lithic scatter. Late Woodland.	Phase II completed. Site not eligible.	No

Site #	Site Name	Description and Site Information (e.g., historic, prehistoric, village, campsite, etc.)	Site Recommended for Phase II Evaluation? Y/N	Site Avoided? Y/N
47DA0480	Bird Effigy	Uncatalogued effigy mound; artifact scatter. Late Woodland.	Phase II completed. Potentially eligible.	Yes Monitoring recommended.
47DA0567	None	Uncatalogued mound site.	No Portion of site within the Alternative H alignment is not eligible.	Yes Monitoring recommended.
47DA0727	Ole Quam Mound Group	Uncatalogued mounds; lithic scatter. Woodland.	Yes[1] Phase II was recommended, but not performed.	Yes Monitoring recommended.
47DA1379	None	Lithic Scatter. Late Paleoindian	Phase II completed. Site not eligible.	No
47DA1381	None	Isolated find. Intermediate Prehistoric.	Phase II completed. Site not eligible.	No
47DA1383	None	Lithic scatter. Intermediate Prehistoric.	Phase II completed. Site not eligible.	No
47DA1429	Babcock Park	Campsite or village; lithic scatter. Early to Middle Woodland.	No Potentially eligible, but no adverse effect.	Yes Monitoring recommended.

[1] The original design of Alternative H (Proposed Action) proposed the extension of Barber Drive south to the Good Shepherd by the Lake Lutheran Church to provide the church's main access so that the existing full access driveway could be converted to a right-in/right-out access and eliminate left-turn conflicts at a non-intersection median opening. Phase II archaeological investigation was recommended in the area of the road extension. Access to the site was denied by the owner and the design was changed to avoid site 47DA0727, Ole Quam Mound Group.

1. Sites evaluated by Phase II survey:

Site #	Site Name	Findings of Phase II Evaluation	Site Determined Eligible for or already listed in the NRHP? Y/N	Site Avoided? Y/N
47DA0105	Colladay Mound	A burial mound was identified at the site. The site does contain *in-situ* cultural features and a high density of archaeological materials.	Potentially eligible	Yes Monitoring recommended.
47DA0106	Thelma Barber	Does not contain the integrity or materials to meet eligibility criteria.	No	No Monitoring recommended.
47DA0107	Barber Campsite	The site does contain *in-situ* cultural features and a high density of archaeological materials.	Determined eligible	No Data Recovery Required
47DA0108	Rock Elm Park	Does not contain the integrity or materials to meet eligibility criteria.	No	No

Site #	Site Name	Findings of Phase II Evaluation	Site Determined Eligible for or already listed in the NRHP? Y/N	Site Avoided? Y/N
47DA0480	Bird Effigy	A burial mound was not identified at the site. The site does contain *in-situ* cultural features and a high density of archaeological materials.	Potentially eligible	Yes Monitoring recommended.
47DA1379	NA	Does not contain the integrity or materials to meet eligibility criteria.	No	No
47DA1381	NA	Does not contain the integrity or materials to meet eligibility criteria.	No	No
47DA1383	NA	Does not contain the integrity or materials to meet eligibility criteria.	No	No

2. Do any sites identified in Phase I or II investigations (Question 3 and 4) involve human burials?

☐ No
☒ Yes

- ☒ Native American Burial:
  Sites 47DA0105, 47DA0106. 47DA0480, 47D0567, and 47D0727.
  All five sites will be avoided.
- ☐ Euro-American Burial:
  - ☐ Documentation Attached:
  - ☐ Consultation with Wisconsin Historical Society (Burial Sites Office and SHPO):
    Dates: _____
    - ☐ Burials will not be affected:
      Identify _____
    - ☐ Burials will be affected:
      Identify _____
- ☐ Documentation attached:
- ☐ Unknown Affiliation:

6. List Environmental Commitments to avoid impacts to sites listed as "Avoided" in Phases I and II, above (also list on Basic Sheet 8, Environmental Commitments):
Identified burial mound sites and potential burial mound sites will be avoided. Monitoring during construction will be completed near these sites by an archaeologist (47DA0105, 47DA0106, 47DA0480, 47DA0567, 47DA0727, and 47DA1429).

7. Identify effects on those sites not avoided in question #4:
Sites 47DA0108, 47DA1379, 47DA1381, and 47DA1383 are not avoided by the proposed action, but were determined not eligible.

Site 47DA0107 (Barber Campsite) is the only potentially eligible site that will not be avoided. (Complete questions below for each site listed in Question 4, above.)

List any commitments to avoid having an adverse effect. (Also list on the Environmental Commitments Basic Sheet)

A Section 106 consultation meeting was held February 17, 2016 and attended by the Ho-Chunk Nation, SHPO, USACE, WDNR and WisDOT. Adverse effects are anticipated and Data Recovery will

be completed at this site. Documentation for Consultation was completed for this site and the MOA was executed. This documentation is included in Appendix K.

☒ Yes, the adverse effect is unavoidable. Describe the adverse effect:
Fee R/W is required from site 47DA0107 to reconstruct the existing 2-lane roadway to current standards. The design provides intersection improvements, turn bays, a required median, and paved shoulders that also accommodate bicycles. The footprint of the proposed design of US 51 would encroach into the boundary of the Barber Campsite (47DA0107), impacting approximately 4 percent of the archaeological site.

☐ Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?

☒ No

☐ Project is not Federally funded.
☒ Other–Explain: FHWA requirements for Section 4(f) do not apply to Site #47DA0107 (Barber Campsite) because the exception in CFR 774.13(b) applies to the site. Section 4(f) applies to archeological sites that are on or eligible for the National Register and that warrant preservation in place. Section 4(f) does not apply if FHWA determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, and the SHPO/THPO and ACHP (if participating) do not object to this determination.

☐ Yes–Complete Factor Sheet B-8, Section 4(f) 6(f) or Other Unique Areas (Form DT2077).

☐ Property is eligible for NRHP and project will have adverse effect.
☐ Other, Explain: _____

☐ Has Documentation for Consultation been prepared?

☐ No
☒ Yes–Complete Question 8

8. Has a Memorandum of Agreement been signed?

☐ No–Pending:
Explain–
☒ Yes, attached: See Appendix K.
Signatories and dates of signature:

☒	USACE	6/09/2020
☒	FHWA	7/27/2020
☒	WHS	7/24/2020
☒	American Indian Tribes	4/21/2020
☒	WisDOT	6/10/2020
☒	WDNR	4/20/2020

Commitments:
☒ Data Recovery:
☒ Yes Date plan accepted: July 27, 2020
Prepared by: UW-Milwaukee Cultural Resource Management
☐ No
☒ Monitoring.
☒ Other:

Stipulations include:
a. Archaeological Data Recovery Plan for Barber Campsite (47DA0107).
b. Scholarly journal publication.

c. Fencing of NRHP-eligible sites; monitoring of ground-disturbing activity during construction.
d. On-site archaeological monitoring of uncatalogued burial sites.
e. Archaeological survey of borrow sites, batch plants, and staging areas.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

Section 4(f) is a federal highway law (49 USC 303) that provides protection to lands such as recreation areas, parks, significant historic sites, and wildlife and waterfowl refuges. The Section 4(f) protection applies to both public and private historic sites but only to recreational areas that are publicly owned. A use of Section 4(f) property is defined in 23 CFR 774.17, and occurs when:

1. Land is permanently incorporated into a transportation facility.
2. There is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservationist purposes.
3. There is a constructive use of a Section 4(f) property.

No use of lands or other properties under the purview of Section 4(f) is allowed unless a Section 4(f) determination has been approved by FHWA showing there is no feasible and prudent alternative and the project incorporates all possible planning to minimize harm. Section 4(f) requirements apply to all actions approved by US Department of Transportation agencies, including FHWA.

Section 6(f) of the Land and Water Conservation Act requires that the conversion of lands or facilities acquired with Land and Water Conservation Fund (LWCF) as amended (16 USC 460l) be coordinated with the Department of Interior.

The unique areas along US 51 are properties with unique ownership or property uses, properties used by the public, or properties with land use restrictions.

The following factor sheets summarize the review of eight Section 4(f) sites and unique areas along the US 51 corridor. There are no Section 6(f) properties. The property locations are shown on Figure B-8.1. Two Section 4(f) resources (Babcock Park and Brost Addition to Mud Lake) would be affected by the proposed action. ~~A Draft Section 4(f) Evaluation for Babcock Park and a *de minimis* for Brost Addition to Mud Lake have been prepared and are under review. The Section 4(f) Evaluation and *de minimis* will be finalized and approved at the time of environmental process completion.~~ The Final Section 4(f) Evaluation is provided as Appendix D.

Figure B-8.1 Section 4(f) Properties and Unique Areas

Property ID A–Lincoln Park
Property ID B–Colladay Point Park
Property ID C–Kramper Conservation Easement
Property ID D–Lower Mud Lake Fishery
Property ID E–Franklin Conservation Easement
Property ID F–Babcock Park
Property ID G–Lower Yahara River Trail
Property ID H–Brost Addition to Mud Lake

1. **Property Name:**
Lincoln Park

2 **Location:**
Map ID A
This 0.37-acre parcel is located east of Barber Drive, between Lake Kegonsa and Barber Drive in Dunn. The parcel appears to have formally been the portion of Schneider Drive that extended east of Barber Drive to Lake Kegonsa. The property location is shown on Figure B-8.1.

3. **Ownership or Administration:**
Town of Dunn Park

4 **Type of Resource:**

☒ Public Park.
☐ Recreational lands.
☐ Ice Age National Scenic Trail.
☐ NRCS Wetland Reserve Program.
☐ Wildlife Refuge.
☐ Waterfowl Refuge.
☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
☒ Other–Identify: Lake access.

5. **Do FHWA requirements for section 4(f) apply to the project's use of the property?**

☒ No–Check all that apply:

☐ Project is not federally funded.
☒ No land will be acquired in fee or PLE and the alternative will not affect the use.
☐ Property is not on or eligible for the NRHP.
☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
☐ Interstate Highway System Exemption.
☐ Other–Explain:

☐ Yes–Check all that apply:

☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
  ☐ Historic Bridge.
  ☐ Park minor involvement.
  ☐ Historic site minor involvement.
  ☐ Independent bikeway or walkway.
  ☐ Great River Road.
  ☐ Net Benefit to Section 4(f) Property. Explain: _____
☐ Full 4(f) evaluation approved on _____.

6. **Was special funding used to acquire the land or to make improvements on the property?**

☒ No–Special funding was not used for the acquisition of this property.
☐ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☐ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☐ Other–Describe:

7. **Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.**
This 0.37-acre public access park is owned by Dunn. The park is used for stormwater drainage and access to Lake Kegonsa. Because of its status as a public park, Lincoln Point Park qualifies for protection under Section 4(f).

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The proposed action would require no R/W acquisition from the park and the project will not result in a Section 4(f) use of this property (see Figure B-8.2).

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the proposed action would require no R/W acquisition from Lincoln Park and the project will not result in a Section 4(f) use of the property.

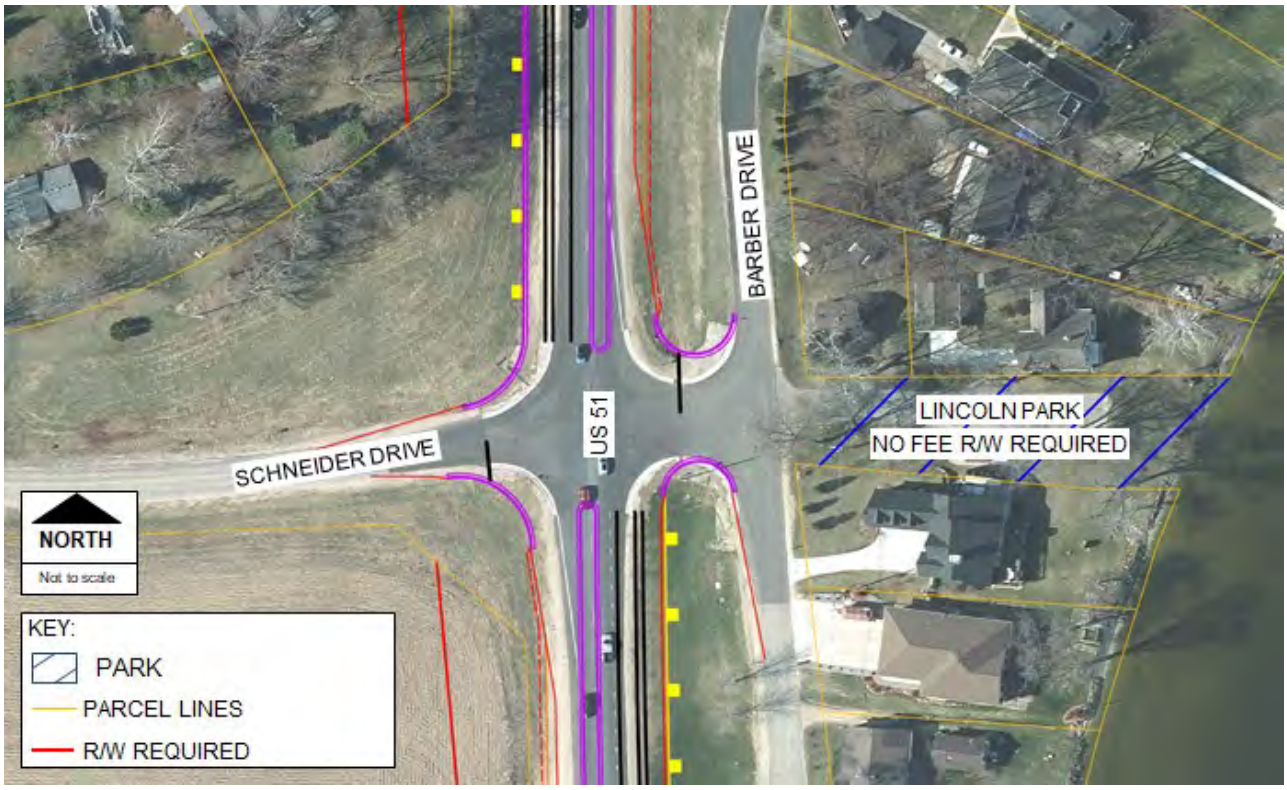


Figure B-8.2 Lincoln Park

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☐ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☐ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☐ Other–Describe:

The proposed action would require no R/W acquisition from the park and the project will not result in a Section 4(f) use of this property.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

No coordination was completed because the proposed action would require no R/W acquisition from Lincoln Park and the project will not result in a Section 4(f) use of the property.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Property Name:
Colladay Point Park

2. Location:
Map ID B
2157 Zor Court, Town of Dunn, Wisconsin. The property is located on the east side of US 51 just south of County B/AB. The property location is shown on Figure B-8.1.

3. Ownership or Administration:
Town of Dunn Park

4. Type of Resource:

☒ Public Park.
☐ Recreational lands.
☐ Ice Age National Scenic Trail.
☐ NRCS Wetland Reserve Program.
☐ Wildlife Refuge.
☐ Waterfowl Refuge.
☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
☒ Other–Identify: Stormwater drainage.

5. Do FHWA requirements for section 4(f) apply to the project's use of the property?

☒ No–Check all that apply:

- ☐ Project is not federally funded.
- ☒ No land will be acquired in fee or PLE and the alternative will not affect the use.
- ☐ Property is not on or eligible for the NRHP.
- ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
- ☐ Interstate Highway System Exemption.
- ☐ Other–Explain:

☐ Yes–Check all that apply:

- ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
  - ☐ Historic Bridge.
  - ☐ Park minor involvement.
  - ☐ Historic site minor involvement.
  - ☐ Independent bikeway or walkway.
  - ☐ Great River Road.
  - ☐ Net Benefit to Section 4(f) Property. Explain: _____
- ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

☐ No–Special funding was not used for the acquisition of this property.
☒ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☐ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☒ Other–Describe: The park received WDNR Knowles-Nelson Stewardship funding.

7. Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.
This park is a little over 7 acres in size and is owned and operated by Dunn. Because of its status as a public park, Colladay Point Park qualifies for protection under Section 4(f). Dunn indicated the park is used primarily for trail walking or hiking. Colladay Point Park is located on the east side of US 51 just west of Lake Kegonsa and south of County B/AB. WDNR Knowles-Nelson Stewardship funding was used for park acquisition.

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The proposed action would include construction of beam guard and a retaining wall along the east side of US 51 to minimize slopes and avoid impacts to the park. Figure B-8.3 shows the park adjacent to US 51 and the location of a representative cross section that is illustrated in Figure B-8.4. The use of beam guard and the retaining wall will allow US 51 to be constructed without the need for R/W from Dunn park. No R/W will be acquired from Colladay Point Park and the project will not result in a Section 4(f) use of this property.

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the proposed action would require no R/W acquisition from Colladay Point Park and the project will not result in a Section 4(f) use of the property.

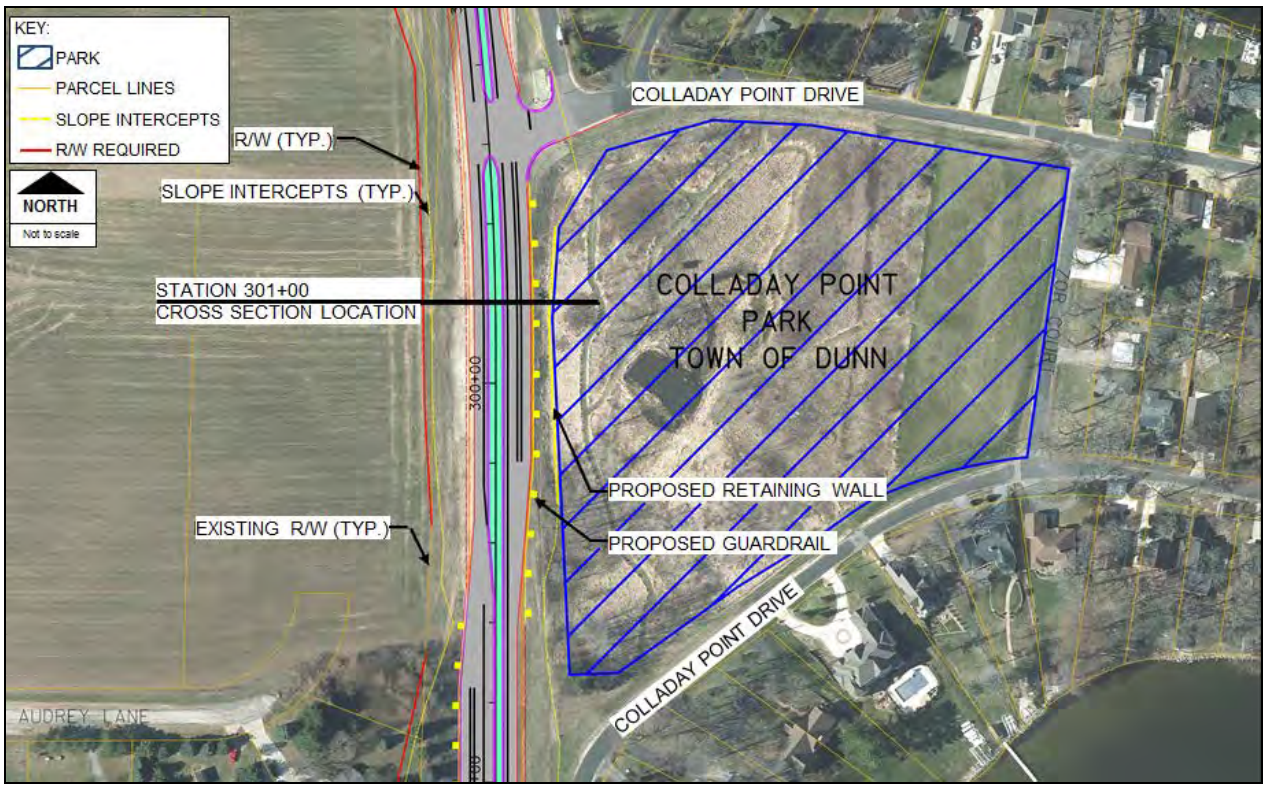


Figure B-8.3 Colladay Point Park

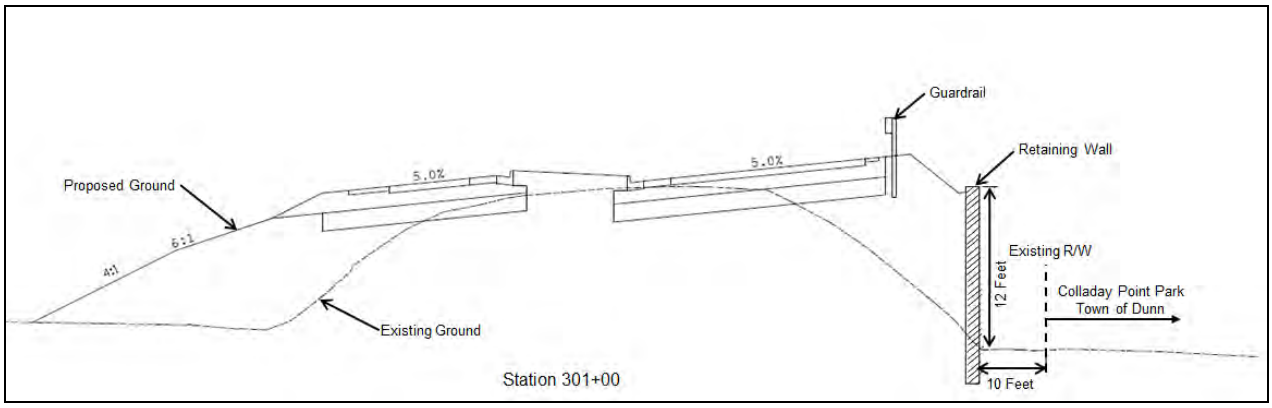


Figure B-8.4 US 51 Cross Section Adjacent to Colladay Point Park

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☐ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☐ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.

☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
☐ Other–Describe:

The proposed action would require no R/W acquisition from the park and the project will not result in a Section 4(f) use of this property.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:
(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

WisDOT consulted with Dunn regarding the proposed measures to avoid impacts to the park, specifically the use of beam guard and the construction of a retaining wall. In an email dated September 30, 2015, Dunn indicated it was in favor of the proposed design features that would result in avoidance of the park.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Property Name:
Kramper Conservation Easement

2. Location:
Map ID C
On the east and west sides of US 51 just north of the Dyreson Road/US 51 intersection, town of Dunn, Wisconsin. The property location is shown on Figure B-8.1.

3. Ownership or Administration:
Privately owned residence and farm that has a town of Dunn conservation easement.

4. Type of Resource:

- ☐ Public Park.
- ☐ Recreational lands.
- ☐ Ice Age National Scenic Trail.
- ☐ NRCS Wetland Reserve Program.
- ☐ Wildlife Refuge.
- ☐ Waterfowl Refuge.
- ☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
- ☒ Other–Identify: Land has a town of Dunn conservation easement.

5. Do FHWA requirements for section 4(f) apply to the project's use of the property?

☒ No–Check all that apply:

- ☐ Project is not federally funded.
- ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
- ☐ Property is not on or eligible for the NRHP.
- ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
- ☐ Interstate Highway System Exemption.
- ☒ Other–Explain: Does not meet public access criteria [FHWA Section 4(f) Policy Paper, July 2012].

☐ Yes–Check all that apply:

- ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
  - ☐ Historic Bridge.
  - ☐ Park minor involvement.
  - ☐ Historic site minor involvement.
  - ☐ Independent bikeway or walkway.
  - ☐ Great River Road.
  - ☐ Net Benefit to Section 4(f) Property. Explain: _____
- ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

☐ No–Special funding was not used for the acquisition of this property.
☒ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☐ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☒ Other–Describe: Funds were received from Dunn, the Natural Heritage Land Trust, and Dane County. For the portion of the property on the west side of US 51, Outdoor Recreation Aid Program (ORAP) funds were received for the conservation easement.

7. Describe the significance of the property:
For other unique areas, include or attach statements of significance from officials having jurisdiction.
The Kramper Conservation Easement land does not qualify for protection under Section 4(f).

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The Kramper Conservation Easement land does not qualify for protection under Section 4(f). For reconstruction of US 51 on existing alignment, the proposed action adjacent to the Kramper Conservation Easement land would require approximately 2.5 acres of fee R/W (see Figure B-8.5).

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the Kramper Conservation Easement land does not qualify for protection under Section 4(f).

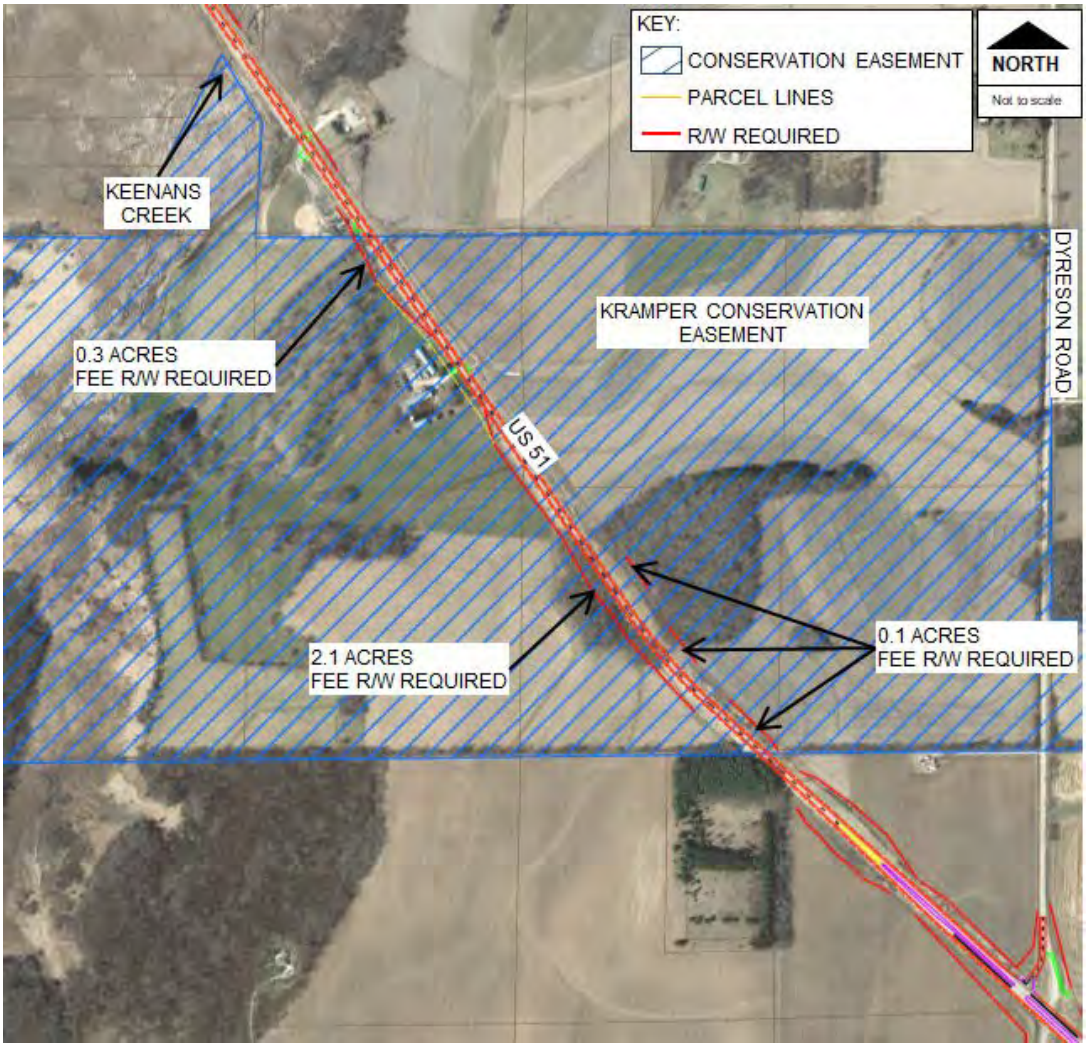


Figure B-8.5 Kramper Conservation Easement

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☒ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☒ Other–Describe: In the area of the Kramper Conservation Easement, a 3-percent grade would meet standards, but would result in greater impact to resources, including the Kramper Conservation Easement. A design justification has been requested to allow the reconstructed roadway grade to match the existing 4-percent grade. FHWA and WisDOT preliminarily concurred, and a design justification will be

formally requested and reviewed for approval during final design. Impacts are also minimized at the Kramper Conservation Easement by staying on the existing alignment and matching the existing profile.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

Coordination with WDNR is ongoing and potential mitigation measures for the anticipated impacts to the Kramper Conservation Easement are being evaluated.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Property Name:
Lower Mud Lake Fishery

2. Location:
Map ID D
The property is located along the east and west sides of US 51 between Mahoney Road and Dyreson Road. The property location is shown on Figure B-8.1.

3. Ownership or Administration:
The property is owned and operated by WDNR and is a public access natural area designated as a fish management and recreation area east of US 51 and a wildlife habitat area west of US 51.

4. Type of Resource:

- ☐ Public Park.
- ☒ Recreational lands.
- ☐ Ice Age National Scenic Trail.
- ☐ NRCS Wetland Reserve Program.
- ☒ Wildlife Refuge.
- ☐ Waterfowl Refuge.
- ☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
- ☐ Other–Identify:

5. Do FHWA requirements for section 4(f) apply to the project's use of the property?

☒ No–Check all that apply:

- ☐ Project is not federally funded.
- ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
- ☐ Property is not on or eligible for the NRHP.
- ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
- ☐ Interstate Highway System Exemption.
- ☒ Other–Explain: The public land holdings are administered under Wisconsin state statutes permitting management for multiple uses; the land is managed for multiple uses. No portions of the property are designated as being for significant park, recreation, or wildlife and waterfowl refuge purposes [23 CFR 774.11(d)].

☐ Yes–Check all that apply:

- ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
  - ☐ Historic Bridge.
  - ☐ Park minor involvement.
  - ☐ Historic site minor involvement.
  - ☐ Independent bikeway or walkway.
  - ☐ Great River Road.
  - ☐ Net Benefit to Section 4(f) Property. Explain: _____
- ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

☐ No–Special funding was not used for the acquisition of this property.
☒ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☒ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☐ Other–Describe:

7. Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.

The Lower Mud Lake Fishery is 281 acres of public land owned and operated by WDNR. The property on the east side of US 51 is designated as a fishery area. The property on the west side of US 51 is designated as wildlife habitat. This property is primarily used for fish management, but recreational activities such as hunting, fishing, hiking, and bird watching are also allowed on the land. In correspondence dated January 18, 2010 and January 20, 2010, WDNR and FHWA determined that the Lower Mud Lake Fishery has multiple uses and is not a Section 4(f) resource. Grant documentation obtained from WDNR indicates that federal Dingell/Johnson grant funds are associated with the purchase of the property. The property is avoided by the proposed action.

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The proposed action would require no R/W acquisition from the resource. Between Mahoney Road and Dyreson Road, a preliminary design justification, allowing a 4-percent roadway grade, was granted to avoid a historic site (Olson-Hemsing Farmstead) and the WDNR's Lower Mud Lake Fishery property. The 4-percent grade matches the existing grade. A 3-percent grade meets the design standards, but impacts the historic property and the WDNR property. The design justification will be formally requested and reviewed for approval during final design (see Figure B-8.6).

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the Lower Mud Lake Fishery does not qualify for protection under Section 4(f).

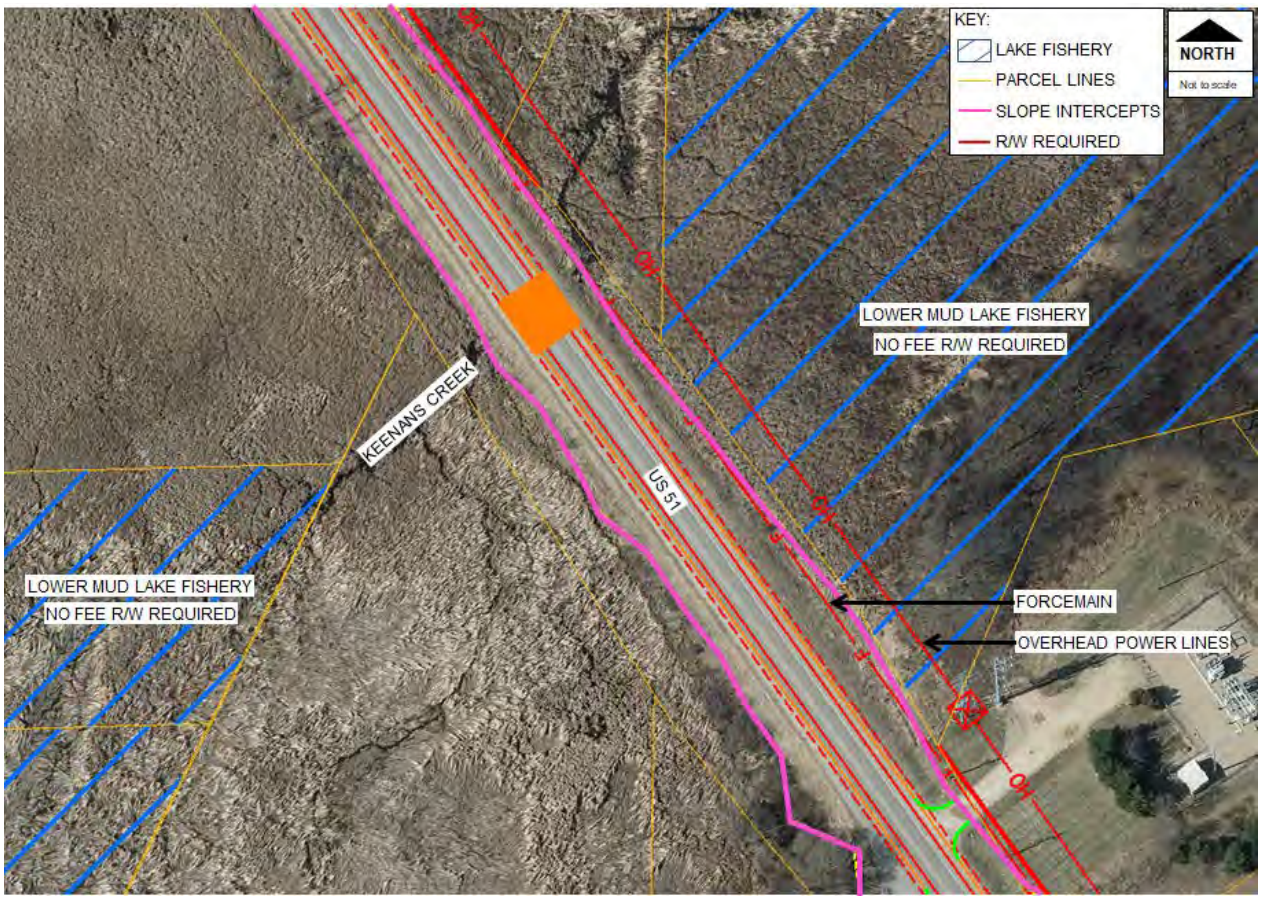


Figure B-8.6 Lower Mud Lake Fishery

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☐ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☐ Other–Describe:

The proposed action would require no R/W acquisition from the Lower Mud Lake Fishery property.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

In correspondence dated January 18, 2010 and January 20, 2010, WDNR and FHWA determined that the Lower Mud Lake Fishery has multiple uses and is not a Section 4(f) resource. Grant documentation obtained from WDNR indicates that federal Dingell/Johnson grant funds are associated with the purchase of the property. The proposed action would require no R/W acquisition from the Lower Mud Lake Fishery property.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Property Name:
Franklin Conservation Easement

2. Location:
Map ID E
The property is located at the southwest quadrant of the US 51 and E. Tower Road intersection in the town of Dunn, Wisconsin. The property location is shown on Figure B-8.1.

3. Ownership or Administration:
This property is a privately-owned residence that has a Dunn conservation easement.

4. Type of Resource:

- ☐ Public Park.
- ☐ Recreational lands.
- ☐ Ice Age National Scenic Trail.
- ☐ NRCS Wetland Reserve Program.
- ☐ Wildlife Refuge.
- ☐ Waterfowl Refuge.
- ☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
- ☒ Other–Identify: This land has a Dunn conservation easement.

5. Do FHWA requirements for section 4(f) apply to the project's use of the property?

☒ No–Check all that apply:

- ☐ Project is not federally funded.
- ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
- ☐ Property is not on or eligible for the NRHP.
- ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
- ☐ Interstate Highway System Exemption.
- ☒ Other–Explain: Does not meet public access criteria [FHWA Section 4(f) Policy Paper, July 2012].

☐ Yes–Check all that apply:

- ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
  - ☐ Historic Bridge.
  - ☐ Park minor involvement.
  - ☐ Historic site minor involvement.
  - ☐ Independent bikeway or walkway.
  - ☐ Great River Road.
  - ☐ Net Benefit to Section 4(f) Property. Explain: _____
- ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

☐ No–Special funding was not used for the acquisition of this property.
☒ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☐ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☒ Other–Describe: Funds for the conservation easement were received from Dunn, Natural Heritage Land Trust, and Dane County.

7. Describe the significance of the property:
For other unique areas, include or attach statements of significance from officials having jurisdiction.
This land has a Dunn conservation easement and does not qualify for protection under Section 4(f).

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The Franklin Conservation Easement land does not qualify for protection under Section 4(f). For reconstruction of US 51 on existing alignment, the proposed action adjacent to the Franklin Conservation Easement land would require approximately 0.8 acres of fee R/W and less than 0.1 acres of temporary limited easement (see Figure B-8.7).

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the Franklin Conservation Easement land does not qualify for protection under Section 4(f).

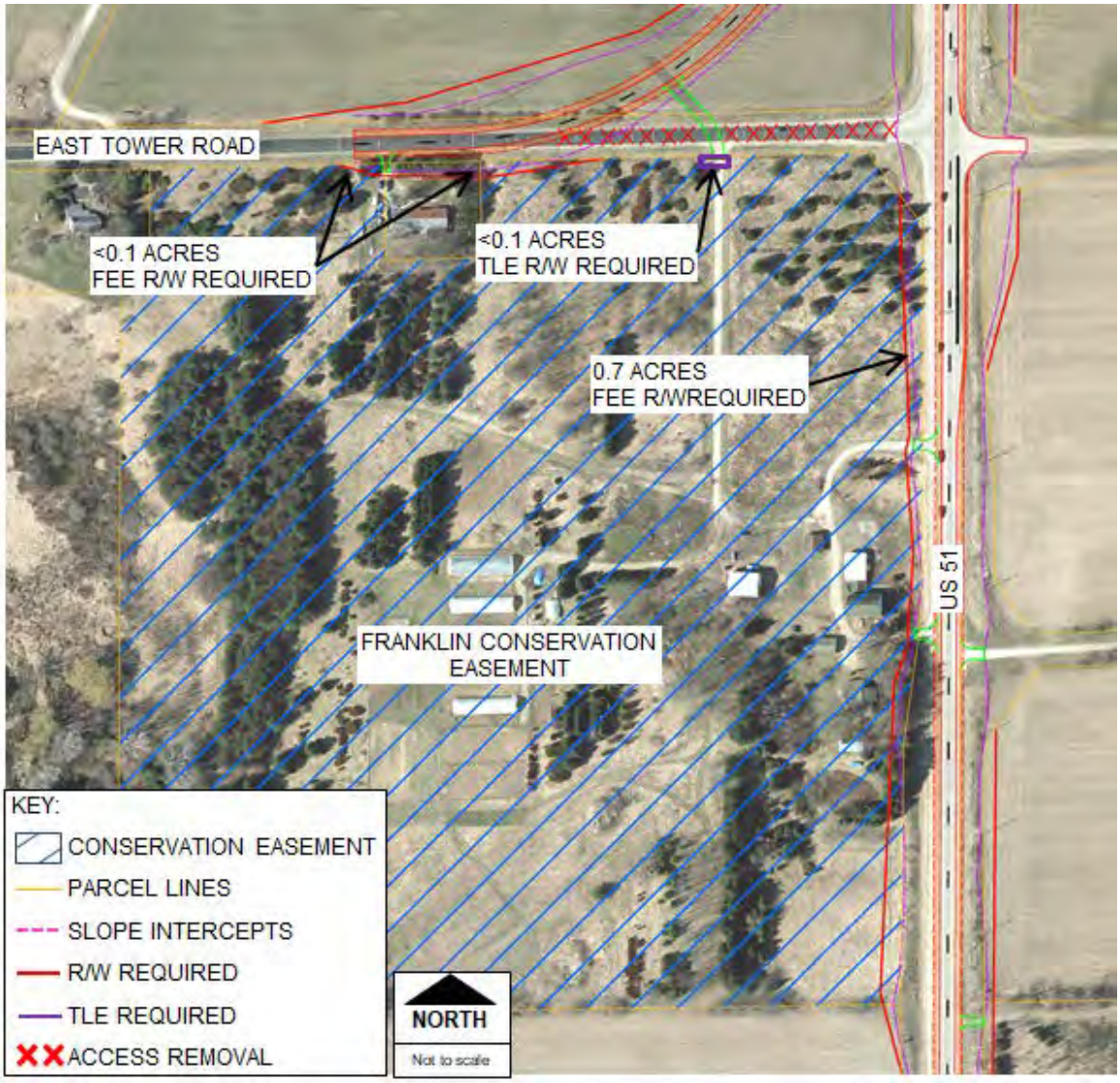


Figure B-8.7 Franklin Conservation Easement

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☒ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☒ Other–Describe: At the Franklin Conservation Easement, impacts are minimized because the reconstructed roadway will remain on the existing alignment and match the existing profile.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

No additional coordination occurred.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. **Property Name:**
   Babcock Park

2. **Location:**
   Map ID F
   The park is located on the west and east sides of US 51 between Burma Road and Bible Camp Road in McFarland, Wisconsin. The property location is shown on Figure B-8.1.

3. **Ownership or Administration:**
   The property is owned and operated by Dane County. This public access park is used for camping, picnicking, fishing, and has boat and canoe launch facilities. The property is also an National Register of Historic Places (NRHP)-eligible archaeological site.

4. **Type of Resource:**
   - ☒ Public Park.
   - ☐ Recreational lands.
   - ☐ Ice Age National Scenic Trail.
   - ☐ NRCS Wetland Reserve Program.
   - ☐ Wildlife Refuge.
   - ☐ Waterfowl Refuge.
   - ☒ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
   - ☐ Other – Identify:

5. **Do FHWA requirements for section 4(f) apply to the project's use of the property?**
   - ☐ No - Check all that apply:
     - ☐ Project is not federally funded.
     - ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
     - ☐ Property is not on or eligible for the NRHP.
     - ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
     - ☐ Interstate Highway System Exemption.
     - ☐ Other - Explain:

   - ☒ Yes - Check all that apply:
     - ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
       - ☐ Historic Bridge.
       - ☐ Park minor involvement.
       - ☐ Historic site minor involvement.
       - ☐ Independent bikeway or walkway.
       - ☐ Great River Road.
       - ☐ Net Benefit to Section 4(f) Property. Explain: _____
     - ☒ Full 4(f) evaluation approved on ~~APPROVAL PENDING~~ Will be approved at time of FONSI approval.

6. **Was special funding used to acquire the land or to make improvements on the property?**
   - ☐ No - Special funding was not used for the acquisition of this property.
   - ☒ Yes:
     - ☐ s.6(f) LWCF (Formerly LAWCON).
     - ☒ Dingell-Johnson (D/J funds).
     - ☐ Pittman-Robertson (P/R funds).
     - ☐ Other – Describe:

7. Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.

This 16-acre park is owned and operated by Dane County and is used for camping, picnicking, fishing, and has boat and canoe launch facilities. The boat launch offers a fish cleaning facility and accessible fishing pier. The park also has a 25-unit campground with electricity supplied to all sites, a fully accessible restroom and shower, and a sanitary dump station. The seasonal campground has a basic operating schedule of May 1 to November 1, with the potential for an additional two to four weeks of camping if the weather permits. The park has a boat mooring dock and a shore fishing station.

Federal SFR Act funds were used for the 1993 Babcock Park Access Renovation Project. That project included construction or renovation of park facilities located south of the Yahara River, including parking lots, boat launch ramps and pier, dredging, fish cleaning and toilet facilities, and an asphalt walkway. WDNR determined that the proposed action would result in a temporary use of real property from Babcock Park that interferes with its authorized purpose under the SFR grant. However, because the use is temporary and will be restored, WDNR determined that coordination with USFWS would not be needed and that the project will not impact terms identified in the grant. Therefore, the requirements relating to the SFR Act of 1950, 64 Stat. 430, as amended 16 USC 777; and 50 CFR Part 80-Administrative Requirements, Pittman-Robertson Wildlife Restoration and Dingell-Johnson SFR Act amended July 24, 2008, are satisfied. Refer to the WDNR correspondence in Appendix H.

- Parking spaces would not be removed from parking lots south of the Yahara River. The proposed action would improve access to the parking lots and boat launch facilities by the addition of turn lanes.
- Boat launch ramps would not be impacted.
- The boat launch pier would not be impacted.
- Areas dredged would not be impacted.
- The fish cleaning and toilet facilities would not be impacted.
- The asphalt walkways in the vicinity of the parking lot would not be impacted.

An NRHP-eligible archaeological site (47DA1429) is also located within Babcock Park. The site is located west of US 51, north of the Yahara River between the existing campsites and Lake Waubesa. The site was likely an open-air campsite village harboring Early Woodland and Middle Woodland occupations.

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

The proposed action adjacent to Babcock Park includes the following:

- Widen the existing 4-lane roadway (53-foot-wide, back of curb to back of curb) by 6 to 30 feet to a width of approximately 59 to 83 feet (back of curb to back of curb).
- Add a TWLTL. The TWLTL would be located between Yahara Drive and Burma Road where an existing 600-foot-long, 16-foot-tall retaining wall runs along the east side of US 51 and the Babcock Park campground is located along the west side of US 51. The TWLTL section provides full access to the northern parking lot for Babcock Park users on the north side of the Yahara River as well as to the park office and shower building. The TWLTL section would be 14 feet wide, the narrowest roadway footprint to minimize R/W impacts to the campground.
- Add right- and left-turn lanes at the Babcock Park boat launch entrance. To improve safety, northbound vehicles leaving the boat launch parking lot would be required to first travel south 0.3 miles to the roundabout at the intersection with Exchange Street before making a U-turn to travel northbound (total of 0.6 miles). A new left-turn lane would be provided for northbound vehicles on US 51 approaching the boat launch entrance.
- Relocate the entrance to the Babcock Park overflow parking lot located on the east side of US 51. The entrance would be shifted approximately 275 feet south of its existing location so that vehicles exiting the overflow lot can travel north on US 51 and access the main boat launch parking lot on the west side of the highway.
- Add a designated left-turn lane at Burma Road, a street with a north entrance to the park campground.
- Provide pedestrian accommodations along both sides of the highway.
- Improve designated pedestrian crossings to provide refuge.

While impacts are minimized, these improvements would require 0.5 acres of fee R/W or approximately 3.1 percent of the park area in addition to 2.9 acres of temporary limited easement. None of the fee R/W or easement acquisition will impact the archaeological site located within Babcock Park and the project will not substantially impair the characteristics of the archaeological site (47DA1428).

Alternative H would also result in an impact to Babcock Park related to a sanitary sewer force main. KSD currently maintains a sanitary sewer force main in a 20-foot permanent easement that runs along the east side of US 51 within the boundaries of Babcock Park. The widening of US 51 would cause KSD to shift the force main to the east so that it is not located within the newly expanded US 51 R/W. Shifting the force main would likely require the KSD to obtain additional permanent easement through Babcock Park. Temporary construction easement may also be needed.

This temporary impact would not be considered a Section 4(f) use because:

- Duration is temporary and there is no change in ownership of the land.
- Scope of work is minor in nature and magnitude of changes to Section 4(f) property is minimal.
- There will be no anticipated permanent adverse physical impacts or interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis.
- The land being used will be fully restored and returned to a condition, which is at least as good as what existed before the project.
- There is documented agreement on the above conditions with officials having jurisdiction over the Section 4(f) resource.

Dane County Parks is aware of the need for easements associated with the force main. Alternative H is the preferred alternative and construction staging of the force main will be coordinated with Dane County Parks. Dane County Parks will be notified of construction impacts and disturbed lands will be restored as soon as construction in the vicinity of the park is completed. The general location of the possible utility easement is shown on Figure B-8.8. Refer to the Plan Sheets in Appendix E for more detailed maps showing areas of additional easement acquisition.

See Figure B-8.8 for a schematic of the general locations in Babcock Park where R/W is needed for the proposed action. Refer to the Plan Sheets at the end of this Factor Sheet for more detailed maps showing areas of required fee R/W and easement acquisition.

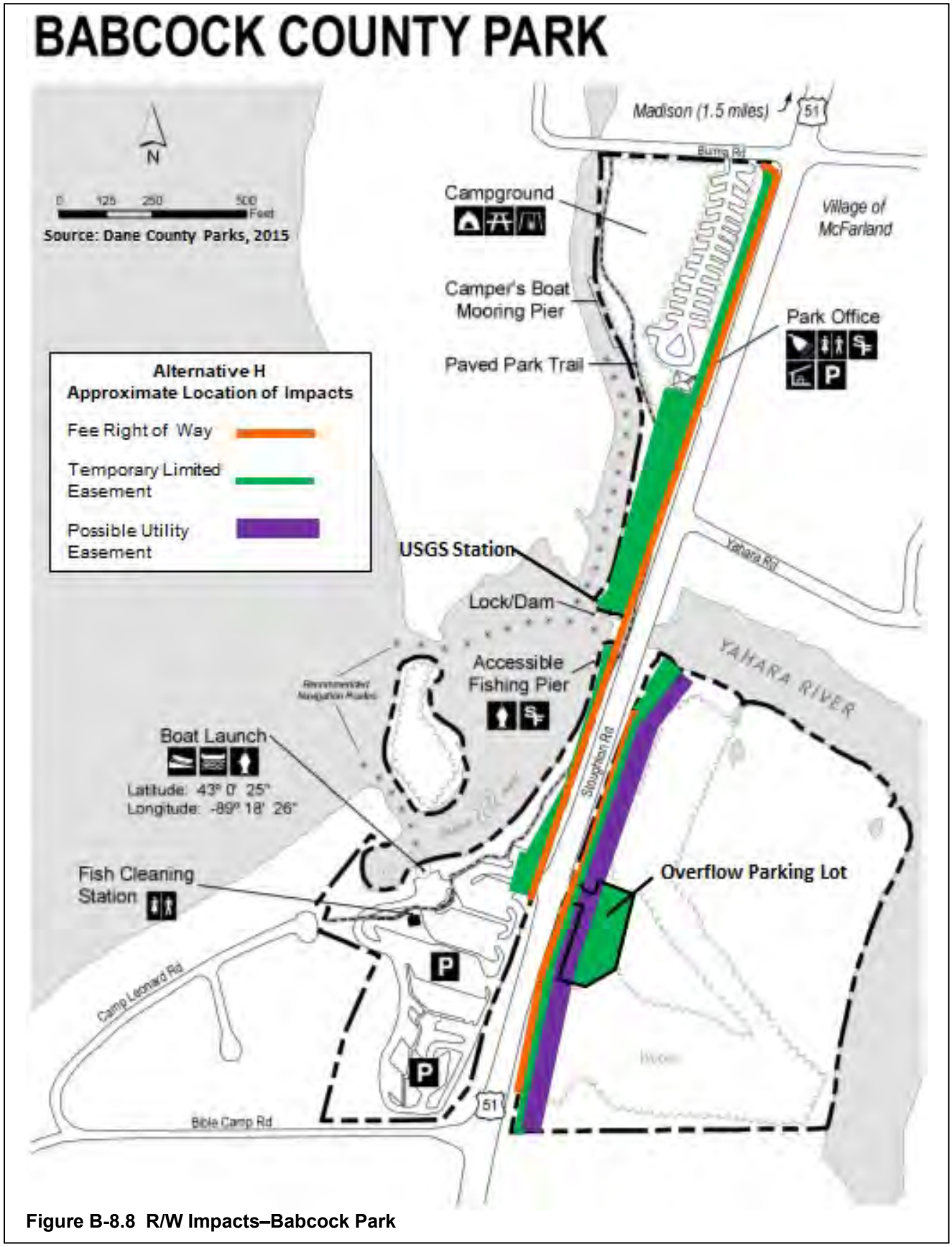


Figure B-8.8 R/W Impacts–Babcock Park

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.

   Under the No Build Alternative, no improvements would be made to US 51, and R/W would not be acquired from Babcock Park. The No Build Alternative does not meet the project's purpose or any of the need factors. Although it is feasible, it is not prudent because it does not address safety or operational problems.

2. Improvement without using the 4(f) lands.

   Under Alternative A–Low Build, no improvements to US 51 would be constructed adjacent to Babcock Park and therefore no R/W would be acquired from park. From an overall project perspective, Alternative A is a feasible avoidance alternative, but it is not prudent because it does not address the project need factors in the McFarland area as well as Alternative H.

3. Alternatives on new location.

   According to 23 CFR 774, feasible and prudent avoidance alternatives must be investigated before impacting park resources. Because Babcock Park is located on both sides of US 51, an off-alignment route would be required to avoid Babcock Park. The alignments considered would route US 51 west of Lake Waubesa or east of Babcock Park through residential neighborhoods in McFarland. See Figure B-8.9 for a graphic of the off-alignment alternatives considered.

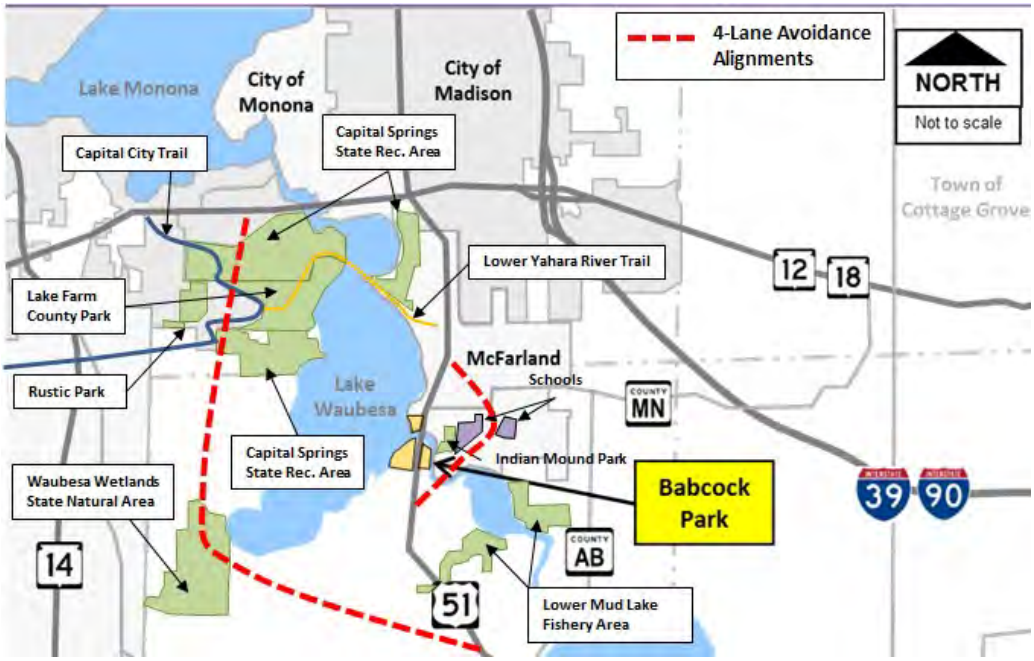


Figure B-8.9 4-Lane Alignments that Avoid Babcock Park

Both of the off-alignment alternatives could feasibly be constructed to avoid Babcock Park, but the alignments would not be prudent. Both off-alignment alternatives would result in impacts to resources other than Babcock Park that are protected by Section 4(f) and cannot be considered avoidance alternatives.

An alignment around the west side of Lake Waubesa would require more than 6 miles of new 4-lane roadway to rejoin US 12/18 near the West Broadway interchange. This alignment would likely have to cross the Waubesa Wetlands State Natural Area located at the southwest end of Lake Waubesa. As the potential alignment proceeded north, it would likely have to cross wetlands, and would cross the Capital Springs State Recreation Area and Capital City Trail. It could also potentially impact Lake Farm County Park and Madison Metropolitan Sewerage District ponds. There are also four Madison Parks in the area, including Rustic Park, Indian Springs Park, Baxter Park, and Ocean Road Park. The Capital Springs State Recreation Area, Lake Farm Park, Rustic Park, Indian Springs Park, Baxter Park, and Ocean Road Park are protected by Section 4(f). This potential alignment could create an additional 2.5 miles of indirection for motorists.

An off-alignment alternative to the east to avoid Babcock Park would need to leave the current alignment of US 51 near Exchange Street and cross the Yahara River. This could require a new bridge at Exchange Street or potentially a new river crossing. The east alignment could impact wetlands and the alignment would impact Legion Memorial Park, Arnold Larson Park, or Indian Mound Conservation Park (listed on NRHP in 1984), before rejoining the existing US 51 north of Burma Road. These parks are protected by Section 4(f). The hilly topography in this area could also result in impacts to the McFarland High School and Indian Mound Middle School (both of which are finishing up major renovations) located along the east boundary of Indian Mound Conservation Park. This avoidance alignment would likely require residential and business relocations.

An off-alignment alternative shifted even farther east or west to avoid the resources discussed is not prudent and would create additional indirection for motorists. With US 14 located approximately 4 miles to the west and I-39/90 located approximately 3.25 miles to the east, US 51 is needed on or near its current alignment.

While the off-alignment alternatives would avoid Babcock Park, they cannot be considered avoidance alternatives because they would result in extensive impacts to other resources protected by Section 4(f) as well as unreasonable economic and social impacts with severe disruption to the McFarland community.

The avoidance alternatives are the No Build Alternative and Alternative A (Low Build Alternative). The No Build Alternative does not meet the project's purpose or any of the need factors. Although it is feasible, it is not prudent because it does not address safety or operational problems. Alternative A is a feasible avoidance alternative, but it is not prudent because it does not address the project need factors in the McFarland area as well as Alternative H. There is no feasible and prudent avoidance alternative to the use of land from the Section 4 (f) property.

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☒ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- ☒ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- ☒ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☒ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below: The historic site will be avoided and the site will be fenced and monitored during construction.

Measures to Minimize Harm

No feasible and prudent alternative was identified that avoids the Babcock Park Section 4(f) property. Alternative H is the preferred alternative and all possible planning to minimize harm has been incorporated into the alternative. WisDOT and FHWA have incorporated the following measures to minimize harm to Babcock Park.

The proposed action was designed to minimize the amount of new R/W required from Babcock Park in the following ways:

- South of the Yahara River on the west side of US 51, the terrace area between sidewalk and curb was eliminated and a retaining wall is used to avoid impacts to the parking lot.
- North of the river, the terrace area between sidewalk and curb was removed.
- The existing 600-foot retaining wall on the east side of US 51 between Yahara Drive and Burma Road is a design constraint that controlled the roadway section. The use of a TWLTL instead of extending the median reduced the roadway width by 2 feet.
- Slope widths and R/W requirements were reduced by using retaining walls along the west side of the roadway.

R/W impacts were reduced by approximately one acre by minimizing the roadway section "footprint" and using retaining walls. WisDOT and FHWA will continue to refine the US 51 design to further reduce impacts to Babcock Park, if possible.

In June 2013, WisDOT obtained an independent appraisal report prepared for the Babcock Park Campground portion of Babcock Park. The appraisal report concluded that considering the mitigation measures as part of Alternative H, the physical and economic impacts on the campsites along US 51 as a result of Alternative H are nominal. The report

concluded that the campsites along US 51 and the campground property are of equal utility in a post-Alternative H condition compared to the current condition. While the TLE for construction purposes would have a negative impact on the campsites, it would only be for the duration of construction.

Mitigation

WisDOT will compensate Dane County Parks for the acquisition from Babcock Park before the reconstruction of US 51. WisDOT will continue to work with Dane County during the design phase to develop appropriate mitigation. The list of mitigation measures requested by the Dane County Parks and agreed to by WisDOT is provided here and shown on Figures B-8.10 through B-8.15.

1. WisDOT will include provisions for way finding signage to park, campground, and boat launch for north- and southbound traffic.
2. WisDOT will replace trees lost within Babcock Park because of construction; location, size, and type of trees will be determined.
3. WisDOT will include relocation and recalibration of the USGS station at Babcock Park.
4. WisDOT will provide an access path from proposed US 51 path south of the Yahara River bridge to the existing fishing pier and dam.
5. WisDOT will provide a crosswalk on US 51 with pedestrian refuge islands near the overflow parking lot on the east side of US 51.
6. WisDOT will provide a shared use path from the overflow parking area on the east side of US 51 to the Yahara River.
7. WisDOT will provide sidewalk on the east side of the Yahara River Bridge and a bicycle and pedestrian path on west side of the bridge.
8. WisDOT will provide a connector path from the proposed US 51 path north of the Yahara River bridge to the parking lot and existing park path on the west side of US 51.
9. WisDOT will reconstruct the lock parking lot as single loaded on the west side and expand the lot north to the existing storage sheds.
10. WisDOT will discuss with Dane County Parks the options for decreasing the entrance drive slope to the shower building parking lot. If needed, the parking lot will be raised and reconstructed with required stormwater facilities.
11. WisDOT will lengthen the span of the Yahara River Bridge to be at least the same as the existing dam structure opening.
12. WisDOT will construct a retaining wall from Station 489+00 to Station 494+00 that includes a transition ramp to provide access to the parking lot.
13. If needed to maintain existing boat landing parking lot roadway geometry, WisDOT will provide a retaining wall from approximately Station 478+50 to approximately Station 481+00.
14. WisDOT will provide a screening and/or barrier wall adjacent to the campground. Between the wall and US 51 west curb line, sidewalk will be provided.
15. WisDOT is willing to provide some aesthetic and informational provisions on the screening and/or barrier wall and will coordinate these items with Dane County Parks.

BABCOCK PARK MITIGATION MEASURES

1. WisDOT will include provisions for way-finding signage to park, campground, and boat launch for north- and southbound traffic.
2. WisDOT will replace trees lost within Babcock Park because of construction; location, size, and type of trees will be determined.
3. WisDOT will include relocation/recalibration of the USGS station at Babcock Park.
4. WisDOT will provide an access path from proposed US 51 path south of the Yahara River bridge to the existing fishing pier and dam.
5. WisDOT will provide a crosswalk on US 51 with pedestrian refuge islands near the overflow parking lot on the east side of US 51.
6. WisDOT will provide a shared use path from the overflow parking area on the east side of US 51 to the Yahara River.
7. WisDOT will provide sidewalk on the east side of the Yahara River Bridge and a bicycle/pedestrian path on west side of the bridge.
8. WisDOT will provide a connector path from the proposed US 51 path north of the Yahara River bridge to the parking lot and existing park path on the west side of US 51.
9. WisDOT will reconstruct the lock parking lot as single loaded on the west side and expand the lot north to the existing storage sheds.
10. WisDOT will discuss with Dane County Parks the options for decreasing the entrance drive slope to the shower building parking lot. If needed, the parking lot will be raised and reconstructed with required stormwater facilities.
11. WisDOT will lengthen the span of the Yahara River Bridge to be at least the same as the existing dam structure opening.
12. WisDOT will construct a retaining wall from Station 489+00 to Station 494+00 that includes a transition ramp to provide access to the parking lot.
13. If needed to maintain existing boat landing parking lot roadway geometry, WisDOT will provide a retaining wall from about Station 478+50 to about Station 481+00.
14. WisDOT will provide a screening and/or barrier wall adjacent to the campground. Between the wall and US 51 west curb line, sidewalk will be provided.
15. WisDOT is willing to provide some aesthetic and informational provisions on the screening and/or barrier wall and will coordinate these items with Dane County Parks.

Figure B-8.10 Impacts and Mitigation Measures at Babcock Park

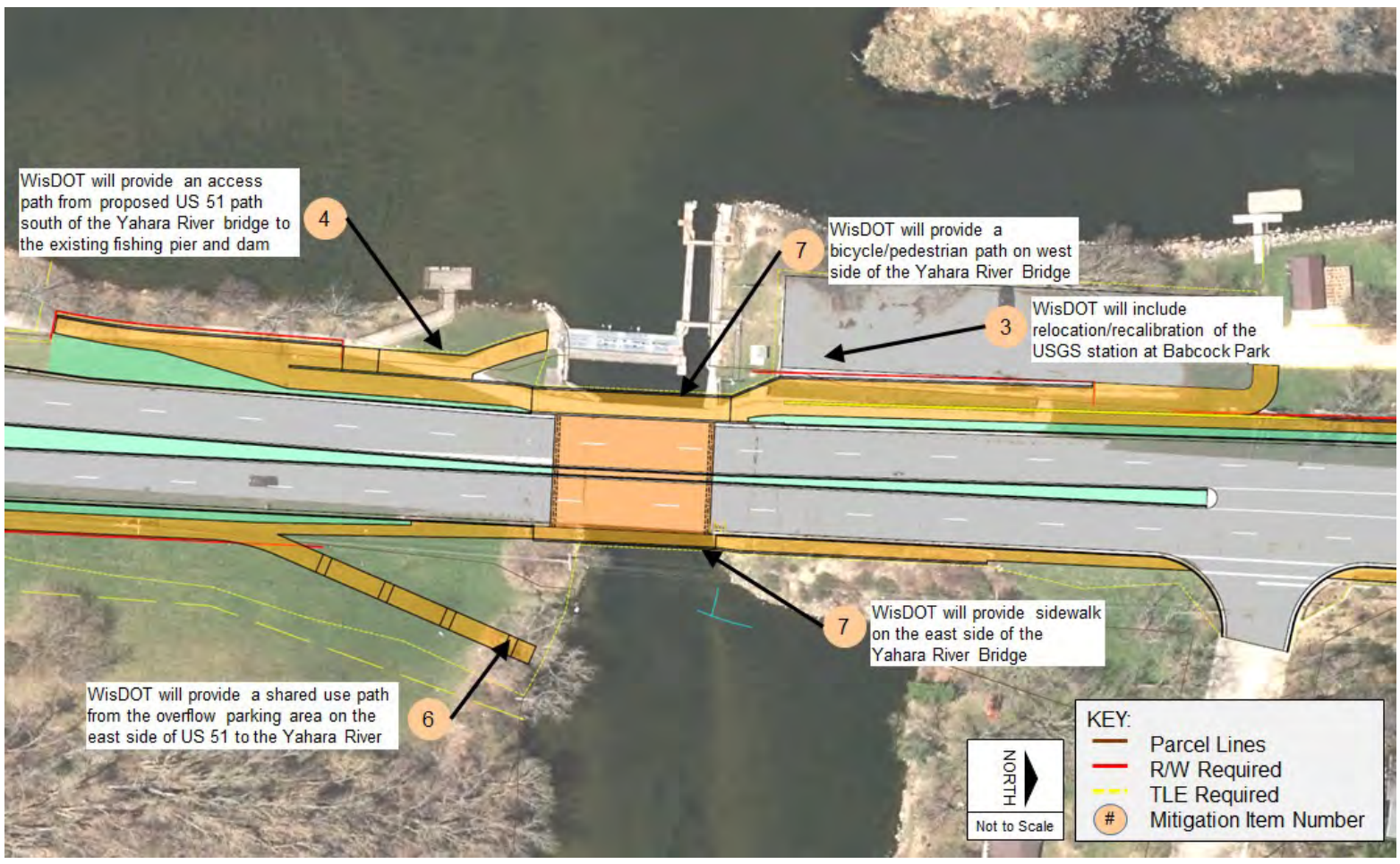


Figure B-8.11 Babcock Park Impacts and Mitigation Items 3, 4, 6, and 7

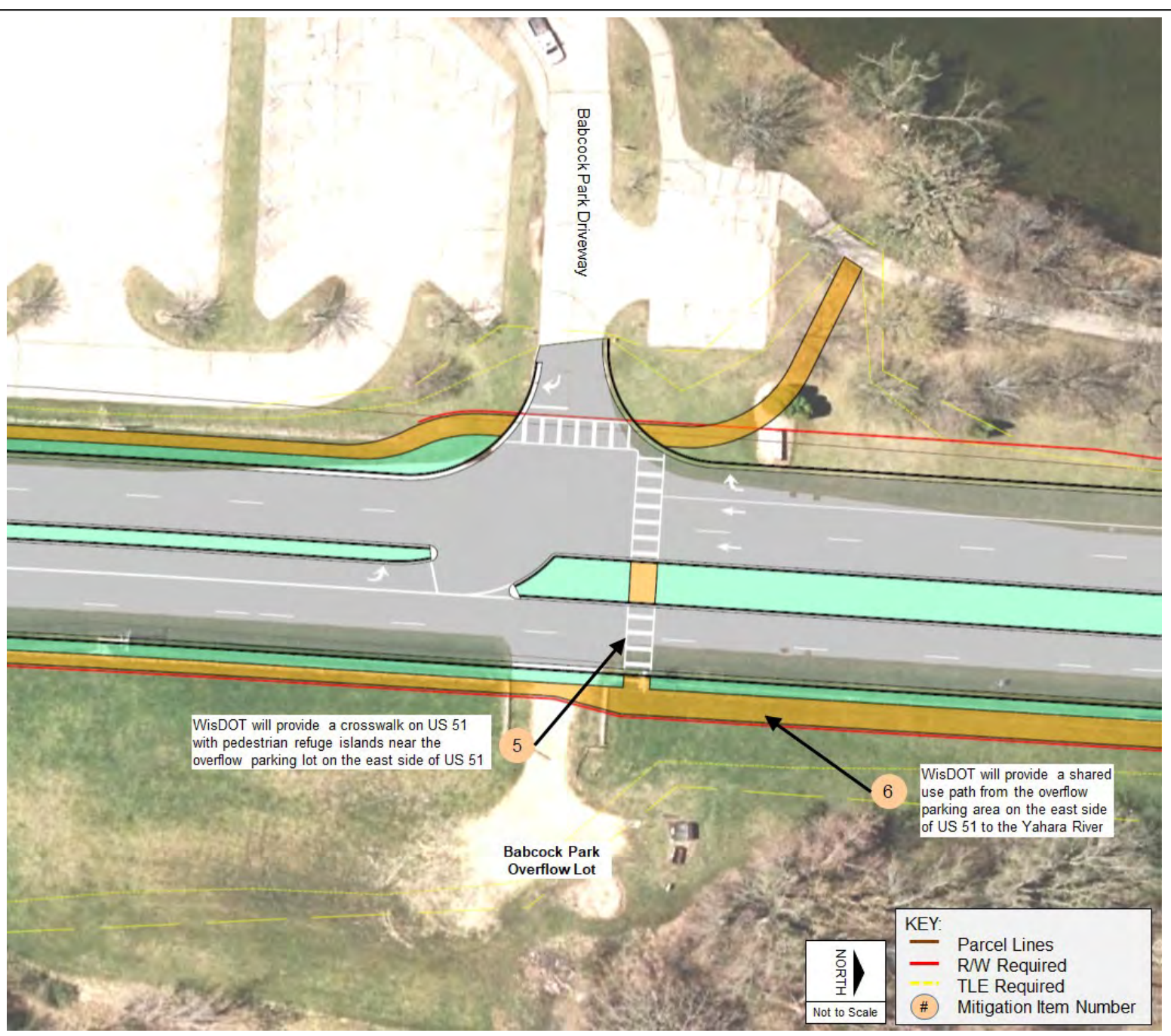


Figure B-8.12 Babcock Park Impacts and Mitigation Items 5 and 6

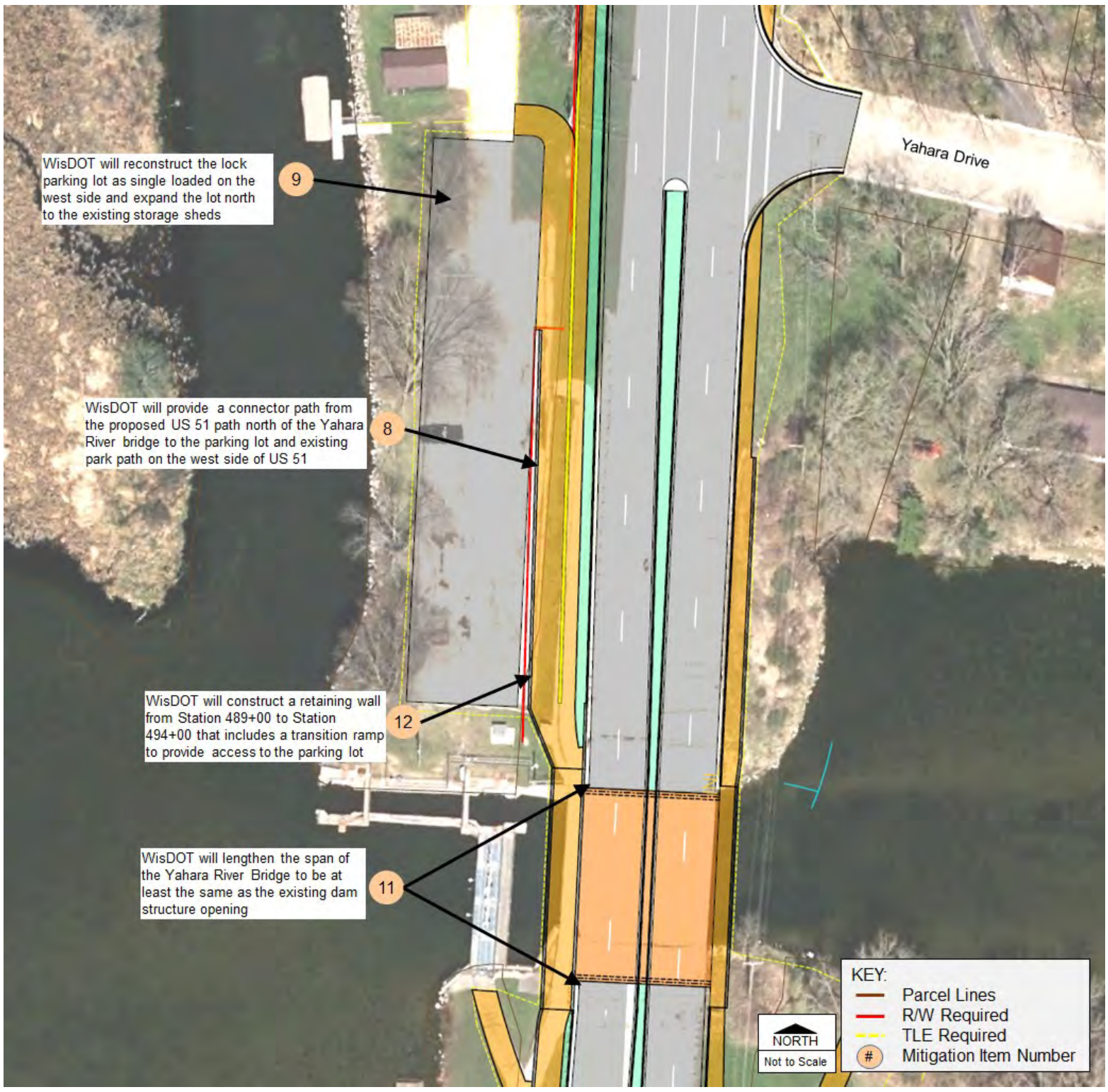


Figure B-8.13 Babcock Park Impacts and Mitigation Items 8, 9, 11, and 12

Considering the mitigation measures listed previously and shown on the figures provided, use of the Section 4(f) resource will not adversely impact the activities, features, and attributes in the following ways:

Relocation and Recalibration of USGS Station (Mitigation Item 3)
The existing USGS station is located on the north side of the Yahara River, near the lock and dam control structure. In this area, a strip of R/W will be acquired from the park for the new bridge and multiuse path. The lock parking lot will be reconstructed and expanded to the north and the USGS station will be relocated to the west, near the lock and dam control structure (see Figure B-8.11).

Shore Fishing (Mitigation Item 4, 5, and 6)
Shore fishing areas and accessible fishing platforms will not be directly impacted. Improvements to park paths and sidewalks will improve access to designated shore fishing locations as well as other shoreline areas in the park. On the west side of US 51, access paths will be reconstructed south of the Yahara River bridge to the existing fishing pier and dam shore fishing area (see Figure B-8.11).

Along the east side of US 51, a new path will extend from the overflow parking lot to the Yahara River, providing a new, accessible shore fishing location and canoe launch location. Canoe launching facilities will be improved by the addition of this path. Also, canoeists that park in the overflow lot and wish to launch a canoe on the west side of US 51 will be able to cross safely at a new pedestrian crossing that will be provided near the overflow parking lot (see Figure B-8.12).

Yahara River Bridge (Mitigation Item 7)
Sidewalk will be added to the east side of the new Yahara River Bridge and a multiuse path will be provided on the west side of the bridge (see Figure B-8.11).

Connector Path and Lock Parking Lot Reconstruction (Mitigation Items 8 and 9)
On the west side of US 51, north of the Yahara River, a new connector path will be constructed from the proposed US 51 path to the parking lot and existing park path. The lock parking lot will be reconstructed as single loaded on the west side and will be expanded north to the existing storage sheds (see Figure B-8.13).

Lengthen Span of Bridge (Mitigation Item 11)
The span of the Yahara River Bridge will be lengthened to be at least the same as the existing dam structure opening (see Figure B-8.13).

Retaining Wall and Transition Ramp (Mitigation Items 12)
An approximately 500-foot-long retaining wall will be constructed from the north end of the Yahara River bridge that includes a transition ramp to provide access to the lock parking lot and the existing park path (see Figure B-8.13).

Boat Launch Parking Lot (Mitigation Items 13)
If needed, a retaining wall will be constructed to minimize highway impacts to the boat launch parking lot so that no parking spaces will be impacted. Access to the boat launch facility will be improved by the additional turning lanes. A safer exit from the boat launch facility to travel north on US 51 is proposed with a right-out turning movement and a U-turn at the proposed roundabout at Exchange Street approximately 1,650 feet south of the entrance (see Figure B-8.10).

Camping and Picnicking (Mitigation Item 14)
A retaining wall will be provided to reduce fill slopes adjacent to the campground. A barrier wall or retaining wall will be used to provide a visual screening of the US 51 highway for Babcock Park users. The height of the screening wall will be determined in consultation with Dane County Parks. The wall could extend from Burma Road to the Babcock Park shower building (see Figure B-8.10).

Between the wall and US 51 curb line, a crash barrier and sidewalk will be provided. The crash barrier will protect the campers from errant vehicles (see Figure B-8.14). Wall design details are being discussed with Dane County Parks. The distance between the nearest campsite parking pads and the retaining and screening wall ranges from approximately 34 to 42 feet. See Figure B-8.15 showing the distances from the screening wall to various campsite parking pads.

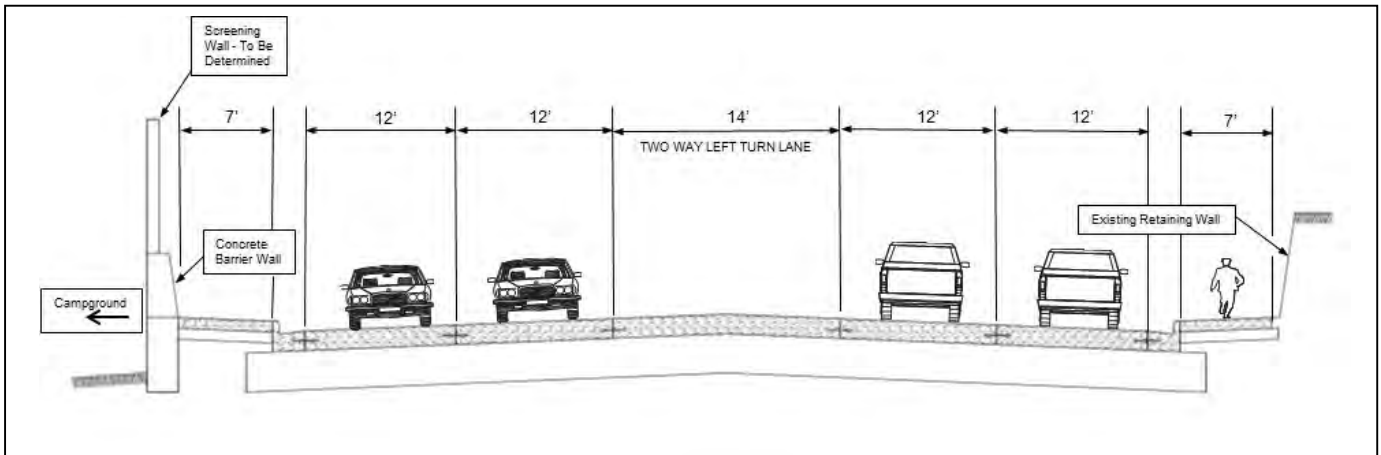


Figure B-8.14 Babcock Park Typical Section at Campground

Figure B-8.15 Babcock Park Screening Wall Distances to Campsites

10. **Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:**

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

WisDOT has coordinated with FHWA, Dane County Parks, and WDNR related to Babcock Park. Agencies agree that Babcock Park qualifies for protection under Section 4(f). Agencies also agree that Federal SFR funds were used for the 1993 Babcock Park Access Renovation Project. WDNR determined that the proposed action would result in a temporary use of real property from Babcock Park that would interfere with its authorized purpose under the SFR grant. However, since the use is temporary and will be restored, WDNR determined that coordination with USFWS would not be needed and that the project would not impact terms identified in the grant.

WisDOT and FHWA met with Dane County Parks and the Park Commission on several occasions to discuss the potential impacts to Babcock Park and proposed mitigation measures. Some of that coordination occurred during the previous environmental study phase, under WisDOT Project ID 5845-06-02. Some of the correspondence references that ID number. The current EA and this Section 4(f) Evaluation are being completed under WisDOT Project ID 5845-06-03.

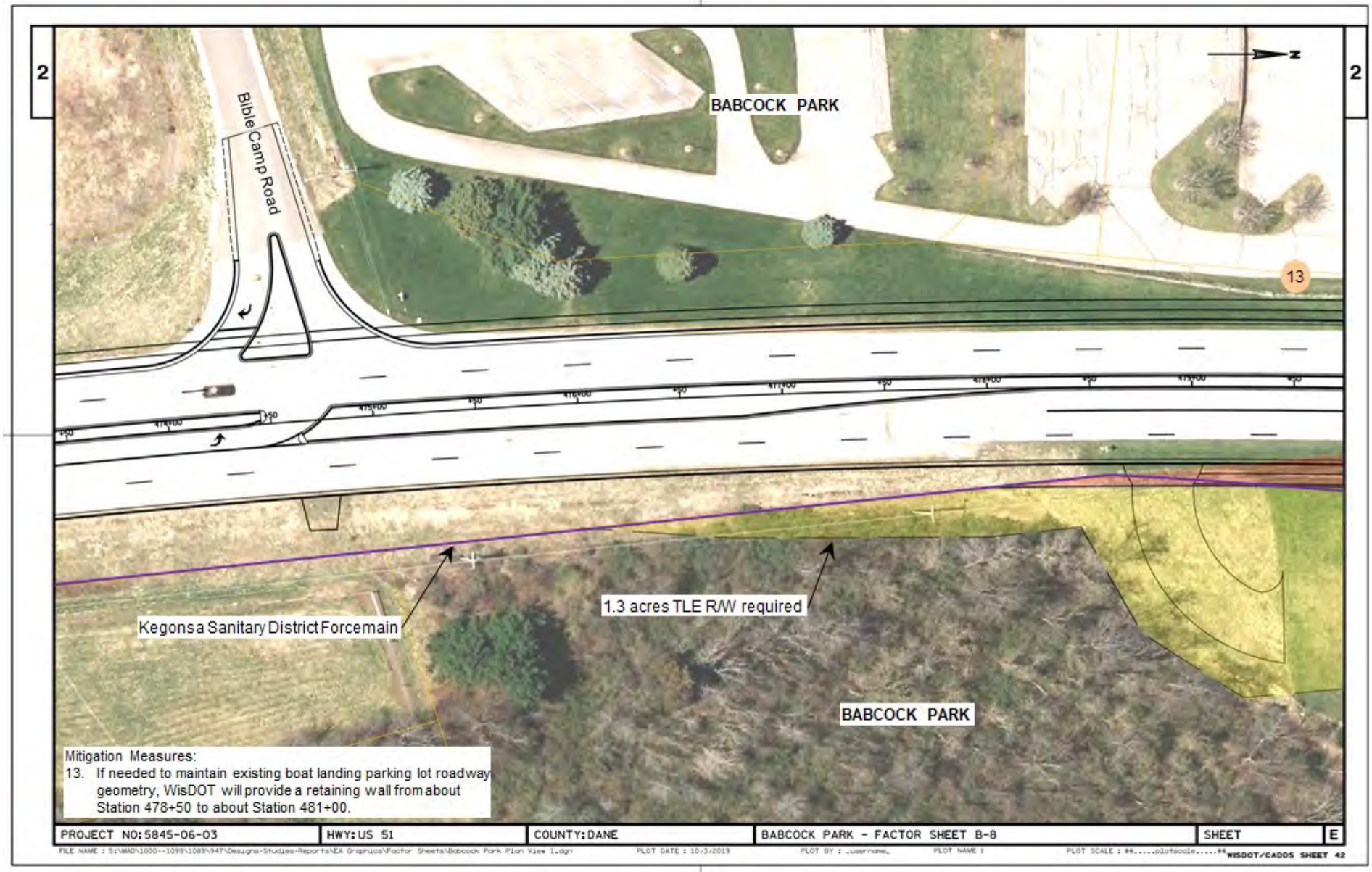
Dane County Parks initially proposed 18 mitigation measures (August 24, 2011), and WisDOT agreed to satisfy 15 of those requested mitigation measures (October 14, 2011). The following three mitigation measures were not possible: (1) WisDOT is unable to begin any improvements within a 5-year time frame; (2) WisDOT is unable to install a pedestrian underpass at the Yahara River bridge because of grade considerations; and (3) WisDOT is unable to fund a campground at an off-site location because WisDOT is not able to provide money as a mitigation measure. In February 2013, Dane County Parks requested that some of the existing campsites be relocated within the park. The relocation of the existing campsites will not be considered a mitigation measure because the proposed location for relocating the campsites was identified as an archaeological site.

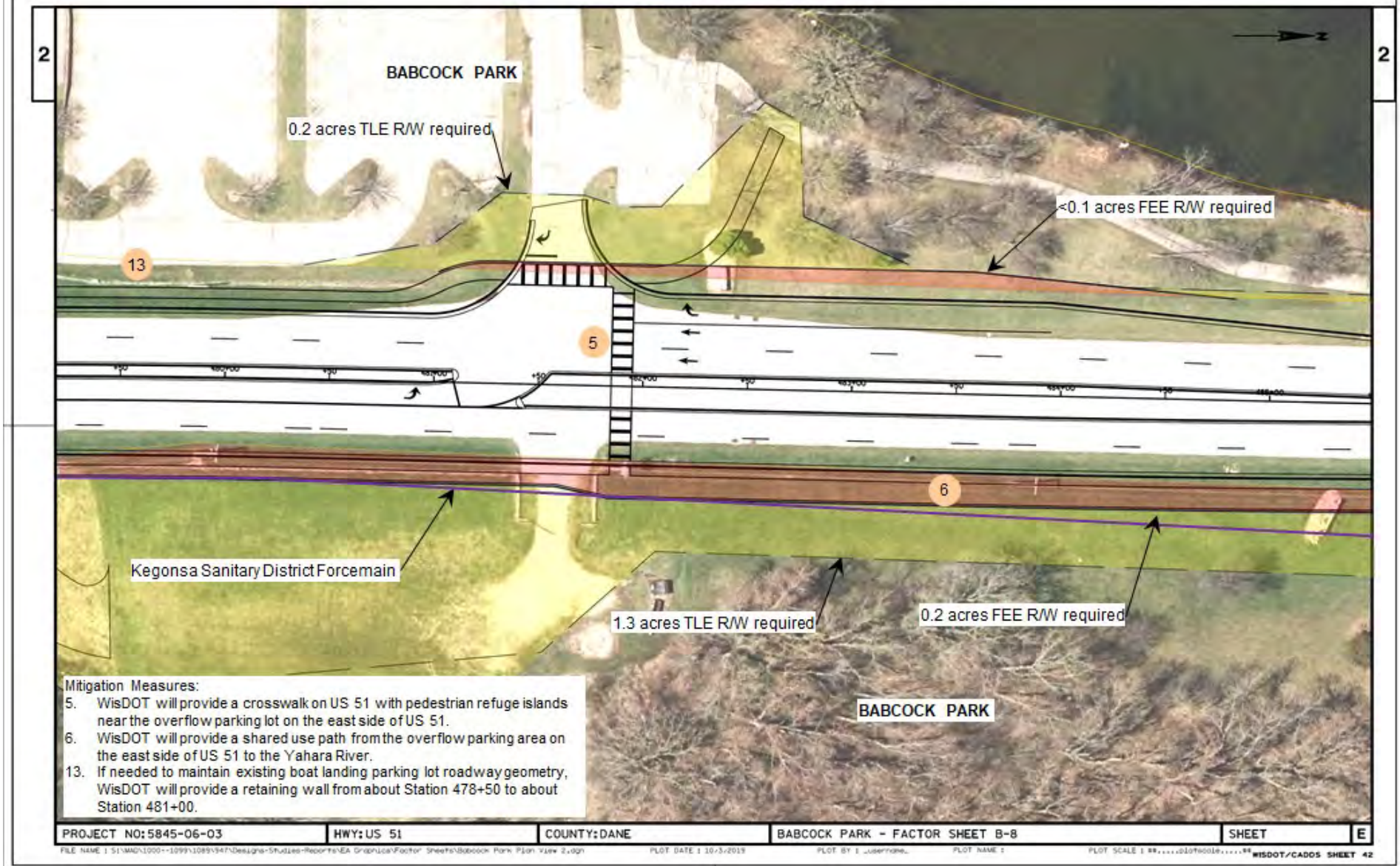
In-person PIMs for this EA were held on August 26, 2015 and September 26, 2019 and a virtual PIM was held October 6, 2020. A public hearing was held in April 2021. The alternatives considered in the EA were presented, including the No Build Alternative, Alternative A (Low Build), and Alternative B (4-lane Expansion). In addition, the build alternative developed for the EA (Alternative H) was presented. The updated alternatives and impacts, including impacts to the Babcock Park Section 4(f) property, were presented at the meetings. Driveway location for the boat landing overflow parking lot was revised based on a comment from a citizen at the PIM. Subsequently WisDOT coordinated with Dane County Parks for agreement with the design modification.

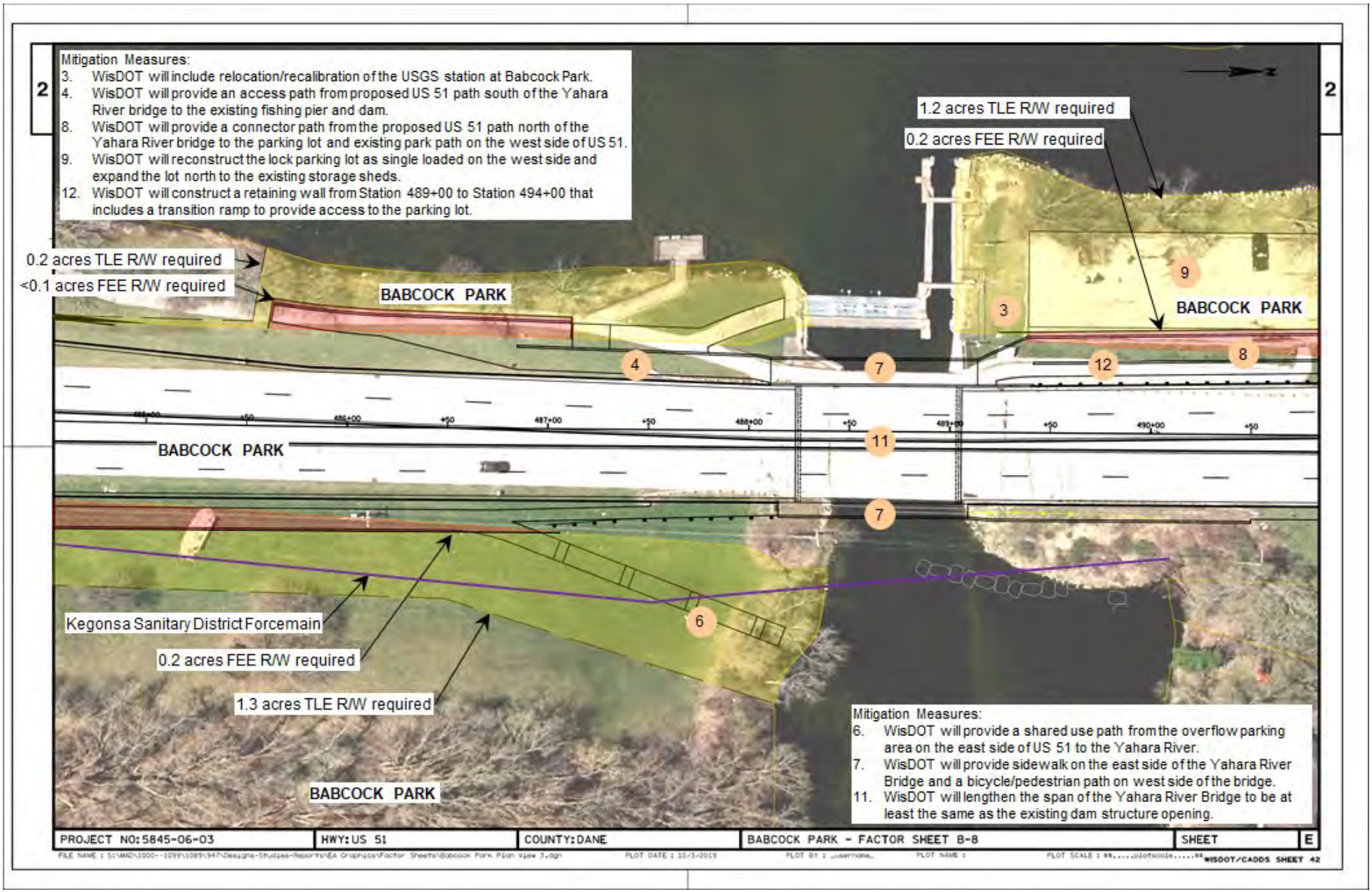
The following table summarizes communications related to Babcock Park.

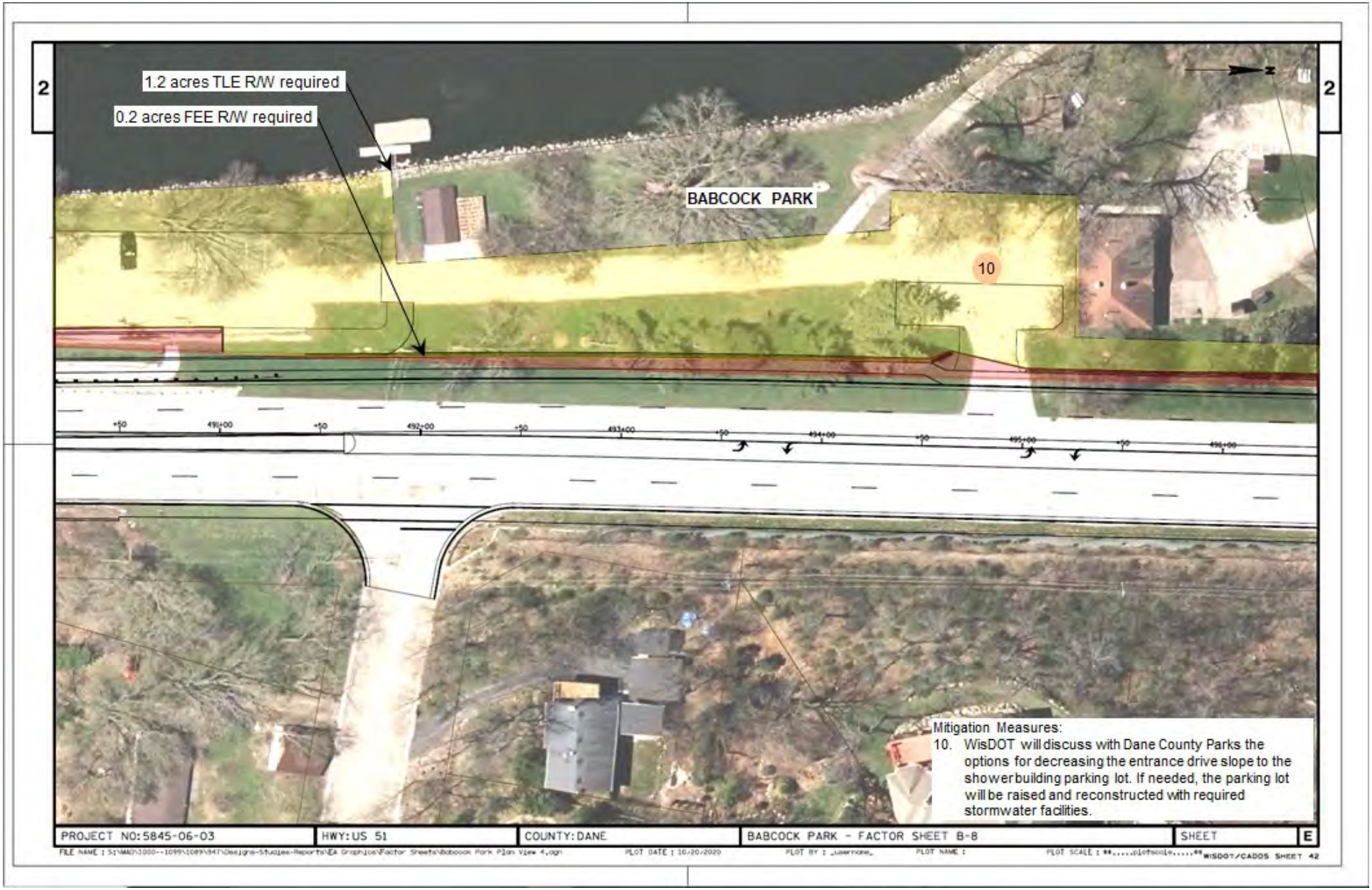
Communication with Dane County Parks on Babcock Park

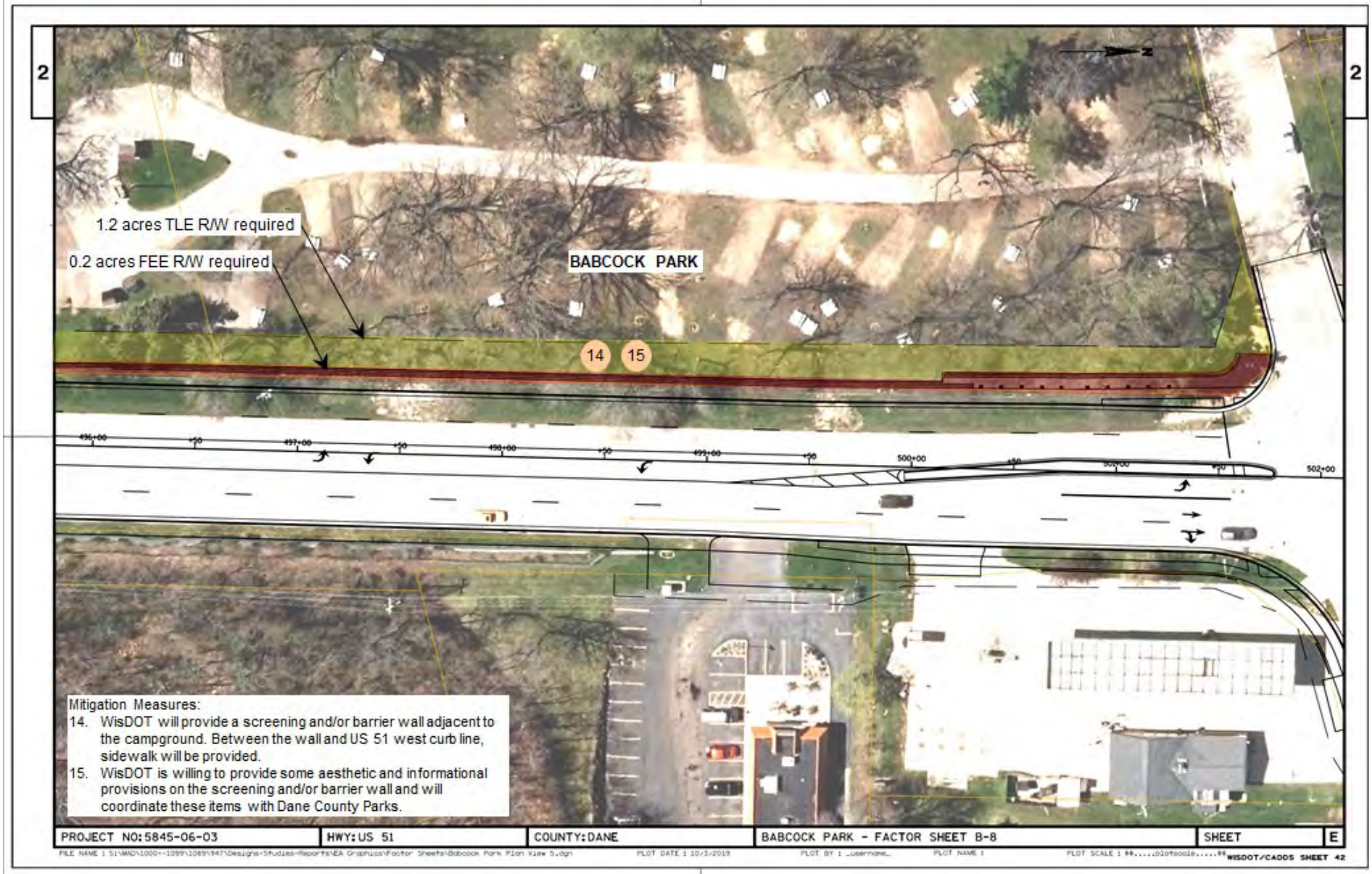
Date	Correspondence Topic and Meeting Topics/Issues Resolved
9/5/2008	Meeting with Dane County Parks to review alignments and typical sections and discuss options for sidewalks and paths at Babcock Park.
11/10/2008	Email to WisDOT accepting invitation to become a participating agency.
9/7/2010	Meeting with Dane County Parks to discuss potential project impacts to Babcock Park and intersection improvements.
5/13/2011	Meeting with Dane County Parks to discuss potential project impacts at Babcock Park, potential mitigation measures, and design refinements.
7/13/2011	WisDOT attended the Park Commission meeting and presented an overview of the US 51 project and summary of preliminary impacts to Dane County's Babcock Parks and potential mitigation measures.
8/24/2011	Letter to WisDOT proposing 18 mitigation measures at Babcock Park.
10/14/2011	WisDOT letter to Dane County Parks responding to proposed 18 mitigation measures at Babcock Park. WisDOT agreed to all requests by Dane County Parks except for the following three: (1) WisDOT is unable to commit to beginning any improvements within a 5-year time frame; (2) WisDOT is unable to install a pedestrian underpass at the Yahara River bridge because of grade considerations; and (3) WisDOT is unable to fund a campground at an off-site location because WisDOT is not able to provide money as a mitigation measure.
10/31/2011	Meeting with Dane County Parks to discuss potential project impacts at Babcock Park and WisDOT proposed mitigation measures.
11/28/2011	Letter to WisDOT indicating the Park Commission was generally in agreement with the 15 proposed mitigation measures at Babcock Park.
1/17/2013	Meeting with Dane County Parks to discuss Babcock mitigation measures and whether WisDOT should pursue a *de minimis* impact determination at Babcock Park or a full Section 4(f) Evaluation.
2/27/2013	WisDOT attended the Park Commission meeting to discuss Babcock mitigation measures and whether WisDOT should pursue a *de minimis* impact determination at Babcock Park or a full Section 4(f) Evaluation. Motion by Park Commission reconfirming the Park Commission's position there is not a *de minimis* impact to the park unless all 15 mitigation measures are provided and the campsites are relocated. Therefore, if Alternative B or Alternative H improvements will be implemented, WisDOT will pursue a full Section 4(f) evaluation for Babcock Park.
10/13/2015 and 10/28/2015	Email correspondence indicating Dane County Parks is in agreement with moving the overflow lot entrance ~~275~~ 250 feet south and grading the lot with a 20:1 slope.
8/12/2019	Meeting with Dane County Parks to discuss updated project impacts at Babcock Park and WisDOT proposed mitigation measures.
11/25/20	Meeting with Dane County Parks to provide a status update on the study, discuss the next steps moving forward and the impacts and mitigation items at Babcock Park.


2
2
Bible Camp Road
BABCOCK PARK
13
Kegonsa Sanitary District Forcemain
1.3 acres TLE R/W required
BABCOCK PARK
Mitigation Measures:
13. If needed to maintain existing boat landing parking lot roadway geometry, WisDOT will provide a retaining wall from about Station 478+50 to about Station 481+00.
PROJECT NO: 5845-06-03
HWY: US 51
COUNTY: DANE
BABCOCK PARK - FACTOR SHEET B-8
SHEET
E
WISDOT/CADDS SHEET 42


2
BABCOCK PARK
0.2 acres TLE R/W required
<0.1 acres FEE R/W required
13
5
6
Kegonsa Sanitary District Forcemain
1.3 acres TLE R/W required
0.2 acres FEE R/W required
BABCOCK PARK
Mitigation Measures:
5. WisDOT will provide a crosswalk on US 51 with pedestrian refuge islands near the overflow parking lot on the east side of US 51.
6. WisDOT will provide a shared use path from the overflow parking area on the east side of US 51 to the Yahara River.
13. If needed to maintain existing boat landing parking lot roadway geometry, WisDOT will provide a retaining wall from about Station 478+50 to about Station 481+00.
PROJECT NO: 5845-06-03
HWY: US 51
COUNTY: DANE
BABCOCK PARK - FACTOR SHEET B-8
SHEET
E
WISDOT/CADDS SHEET 42


Mitigation Measures:
3. WisDOT will include relocation/recalibration of the USGS station at Babcock Park.
4. WisDOT will provide an access path from proposed US 51 path south of the Yahara River bridge to the existing fishing pier and dam.
8. WisDOT will provide a connector path from the proposed US 51 path north of the Yahara River bridge to the parking lot and existing park path on the west side of US 51.
9. WisDOT will reconstruct the lock parking lot as single loaded on the west side and expand the lot north to the existing storage sheds.
12. WisDOT will construct a retaining wall from Station 489+00 to Station 494+00 that includes a transition ramp to provide access to the parking lot.
1.2 acres TLE R/W required
0.2 acres FEE R/W required
0.2 acres TLE R/W required
<0.1 acres FEE R/W required
BABCOCK PARK
BABCOCK PARK
BABCOCK PARK
BABCOCK PARK
Kegonsa Sanitary District Forcemain
0.2 acres FEE R/W required
1.3 acres TLE R/W required
Mitigation Measures:
6. WisDOT will provide a shared use path from the overflow parking area on the east side of US 51 to the Yahara River.
7. WisDOT will provide sidewalk on the east side of the Yahara River Bridge and a bicycle/pedestrian path on west side of the bridge.
11. WisDOT will lengthen the span of the Yahara River Bridge to be at least the same as the existing dam structure opening.
PROJECT NO: 5845-06-03
HWY: US 51
COUNTY: DANE
BABCOCK PARK - FACTOR SHEET B-8
SHEET
E


2
1.2 acres TLE R/W required
0.2 acres FEE R/W required
BABCOCK PARK
10
N
2
Mitigation Measures:
10. WisDOT will discuss with Dane County Parks the options for decreasing the entrance drive slope to the shower building parking lot. If needed, the parking lot will be raised and reconstructed with required stormwater facilities.
PROJECT NO: 5845-06-03
HWY: US 51
COUNTY: DANE
BABCOCK PARK - FACTOR SHEET B-8
SHEET
E


2
2
1.2 acres TLE R/W required
0.2 acres FEE R/W required
BABCOCK PARK
14
15
496+00
+50
497+00
+50
498+00
+50
499+00
+50
500+00
+50
501+00
+50
502+00
Mitigation Measures:
14. WisDOT will provide a screening and/or barrier wall adjacent to the campground. Between the wall and US 51 west curb line, sidewalk will be provided.
15. WisDOT is willing to provide some aesthetic and informational provisions on the screening and/or barrier wall and will coordinate these items with Dane County Parks.
PROJECT NO: 5845-06-03
HWY: US 51
COUNTY: DANE
BABCOCK PARK - FACTOR SHEET B-8
SHEET
E
FILE NAME : S:\MAD\1000--1099\1089\947\Designs-Studies-Reports\EA Graphics\Factor Sheets\Babcock Park Plan View 5.dgn
PLOT DATE : 10/3/2019
PLOT BY : username
PLOT NAME :
PLOT SCALE : 99.....plotscale.....99
WISDOT/CADDS SHEET 42

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Property Name:
Lower Yahara River Trail

2 Location:
Map ID G
The Lower Yahara River Trail is located along the north side of Taylor Road where it crosses US 51 in McFarland. The trail is shown on Figure B-8.1.

3. Ownership or Administration:
Dane County

4 Type of Resource:

- ☐ Public Park.
- ☒ Recreational lands.
- ☐ Ice Age National Scenic Trail.
- ☐ NRCS Wetland Reserve Program.
- ☐ Wildlife Refuge.
- ☐ Waterfowl Refuge.
- ☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
- ☐ Other–Identify:

5. Do FHWA requirements for section 4(f) apply to the project's use of the property?

- ☒ No–Check all that apply:
  - ☐ Project is not federally funded.
  - ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
  - ☐ Property is not on or eligible for the NRHP.
  - ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
  - ☐ Interstate Highway System Exemption.
  - ☒ Other–Explain: The temporary occupancy exception under CFR 774.13(d) applies and there is no use within the meaning of Section 4(f).
- ☐ Yes–Check all that apply:
  - ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
    - ☐ Historic Bridge.
    - ☐ Park minor involvement.
    - ☐ Historic site minor involvement.
    - ☐ Independent bikeway or walkway.
    - ☐ Great River Road.
    - ☐ Net Benefit to Section 4(f) Property. Explain: _____
  - ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

- ☒ No–Special funding was not used for the acquisition of this property.
- ☐ Yes:
  - ☐ s.6(f) LWCF (Formerly LAWCON).
  - ☐ Dingell-Johnson (D/J funds).
  - ☐ Pittman-Robertson (P/R funds).
  - ☐ Other–Describe:

7. Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.

Phase 1 of the Lower Yahara River Trail was completed in 2017 from the Capital City Trail to McDaniel Park in McFarland.

The trail has been completed from McDaniel Park to Elvehjem Road on existing infrastructure within McFarland. Dane County is responsible for the next phase of trail planning and development from Urso Park in McFarland to Lake Kegonsa State Park. When completed, the Lower Yahara River Trail is expected to be about 11 miles long. The Lower Yahara River Trail is open to hiking and biking, and other forms of nonmotorized transit.

The trail is located along the north side of Taylor Road where it crosses US 51 in McFarland. Because of its status as a public recreational facility, the Lower Yahara River Trail qualifies for protection under Section 4(f).

In an email dated November 11, 2019, Dane County provided concurrence with the proposed temporary detour of the trail during US 51 bridge reconstruction. Dane County further indicated detour routing should be coordinated with McFarland. At a meeting with McFarland on December 12, 2019, possible detour routes were discussed.

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The proposed action would require no R/W acquisition from the trail and the project will not result in a Section 4(f) use of this property (see Figure B-8.16).

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because the proposed action would require no R/W acquisition from the Lower Yahara River Trail and the project will not result in a Section 4(f) use of the property.

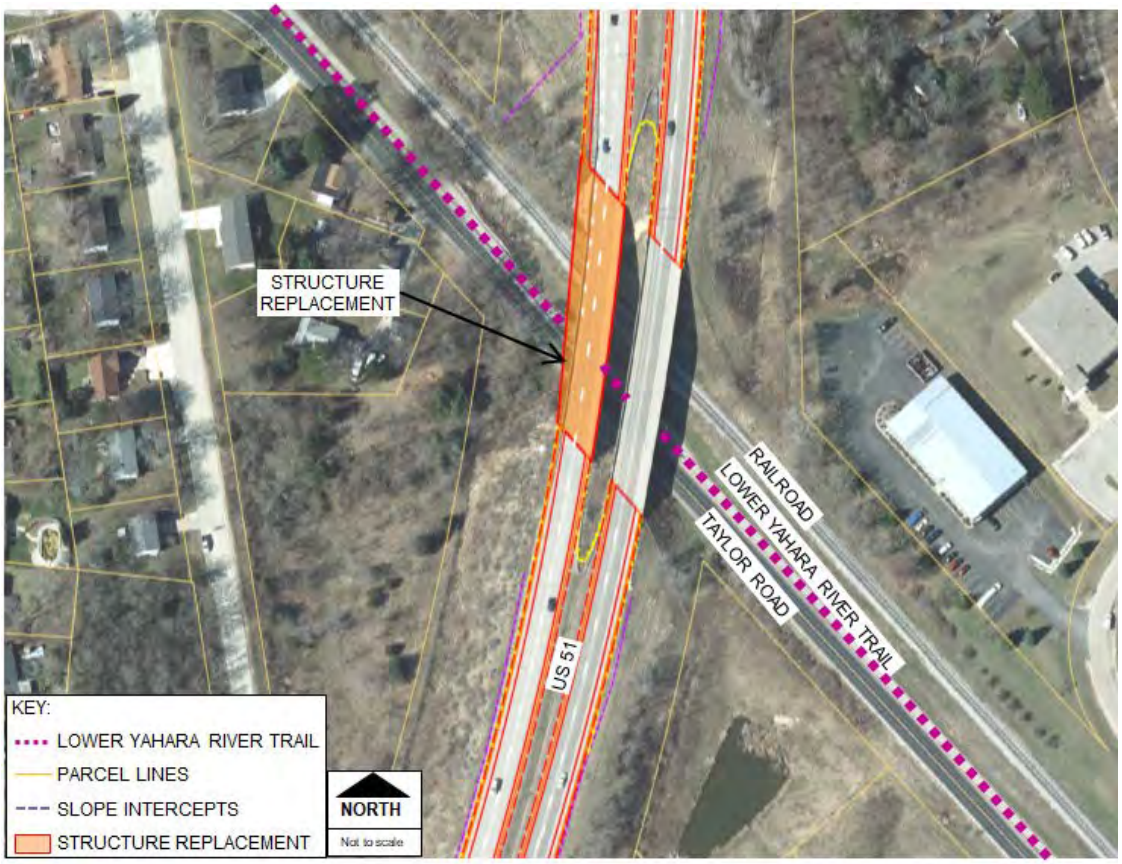


Figure B-8.16 Lower Yahara River Trail

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☐ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☒ Other–Describe: The proposed action would require no R/W acquisition from the trail and the project will not result in a Section 4(f) use of this property. There will be a temporary detour of the trail during reconstruction of the US 51 bridge that spans the trail. The detour route will be coordinated with McFarland during final design.

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

In an email dated November 11, 2019, Dane County provided concurrence with the proposed temporary detour of the trail during US 51 bridge reconstruction.

SECTION 4(f) AND 6(f) OR OTHER UNIQUE AREAS

Wisconsin Department of Transportation

Factor Sheet B-8

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. **Property Name:**
   Brost Addition to Mud Lake (Brost Addition)

2. **Location:**
   Map ID H
   The property is located along the east and west sides of US 51 near Mahoney Road. The property location is shown on Figure B-8.1.

3. **Ownership or Administration:**
   The property is owned and managed by Groundswell Conservancy and is a public access property with uses designated as: protect, enhance, and restore wildlife habitat and natural communities and enhance opportunities for wildlife-based outdoor recreation.

4. **Type of Resource:**

   ☐ Public Park.
   ☒ Recreational lands.
   ☐ Ice Age National Scenic Trail.
   ☐ NRCS Wetland Reserve Program.
   ☒ Wildlife Refuge.
   ☐ Waterfowl Refuge.
   ☐ Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
   ☐ Other–Identify:

5. **Do FHWA requirements for section 4(f) apply to the project's use of the property?**

   ☒ No–Check all that apply:

   ☐ Project is not federally funded.
   ☐ No land will be acquired in fee or PLE and the alternative will not affect the use.
   ☐ Property is not on or eligible for the NRHP.
   ☐ Property is on or eligible for the NRHP however includes a *de minimus* effect finding.
   ☐ Interstate Highway System Exemption.
   ☒ Other–Explain: ~~A draft finding of *de minimis* impact has been prepared and coordination is ongoing with WDNR and the Groundswell Conservancy. Mitigation measures are being discussed and will be agreed to prior to construction activities occurring on the property. A finding of *de minimis* impact will be finalized and approved at the time of environmental process completion.~~ A finding of *de minimis* impact for the Brost Addition is included with the Final Section 4(f) Evaluation in Appendix D.

   ☐ Yes–Check all that apply:

   ☐ Indicate which of the Programmatic/Negative Declaration 4(f) Evaluation(s) applies.
      ☐ Historic Bridge.
      ☐ Park minor involvement.
      ☐ Historic site minor involvement.
      ☐ Independent bikeway or walkway.
      ☐ Great River Road.
      ☐ Net Benefit to Section 4(f) Property. Explain: _____
   ☐ Full 4(f) evaluation approved on _____.

6. Was special funding used to acquire the land or to make improvements on the property?

☐ No–Special funding was not used for the acquisition of this property.
☒ Yes:

☐ s.6(f) LWCF (Formerly LAWCON).
☐ Dingell-Johnson (D/J funds).
☐ Pittman-Robertson (P/R funds).
☒ Other–Describe: Knowles-Nelson Stewardship Grant funds.

7. Describe the significance of the property. For other unique areas, include or attach statements of significance from officials having jurisdiction.

The Brost Addition is approximately 68 acres of public land owned and operated by the Groundswell Conservancy. The property was acquired in part with a grant from WDNR and is open to the public with use defined in the Draft Land Management Plan and grant document as:

1. For conservation and recreation purposes (Management Plan).
2. To protect, enhance, and restore wildlife habitat and natural communities (Project Purpose in the grant document).
3. To enhance opportunities for wildlife-based outdoor recreation (Project Purpose in the grant document).

8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**
The proposed action would require approximately 1.7 acres of fee R/W from the Brost Addition, with impacts along both sides of US 51. In addition, KSD maintains a sanitary sewer force main along the east side of US 51 within an easement on the property. KSD has indicated it will relocate portions of the force main as a result of the US 51 improvements and the need for additional easement acquisition by KSD is anticipated. The effect is shown of Figure B-8.17.

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.
2. Improvement without using the 4(f) lands.
3. Alternatives on new location.

These alternatives were not evaluated because a finding of *de minimis* impact was completed for the Brost Additon~~finding is anticipated~~. Refer to the finding of *de minimis* impact with the Section 4(f) Evaluation in Appendix D.

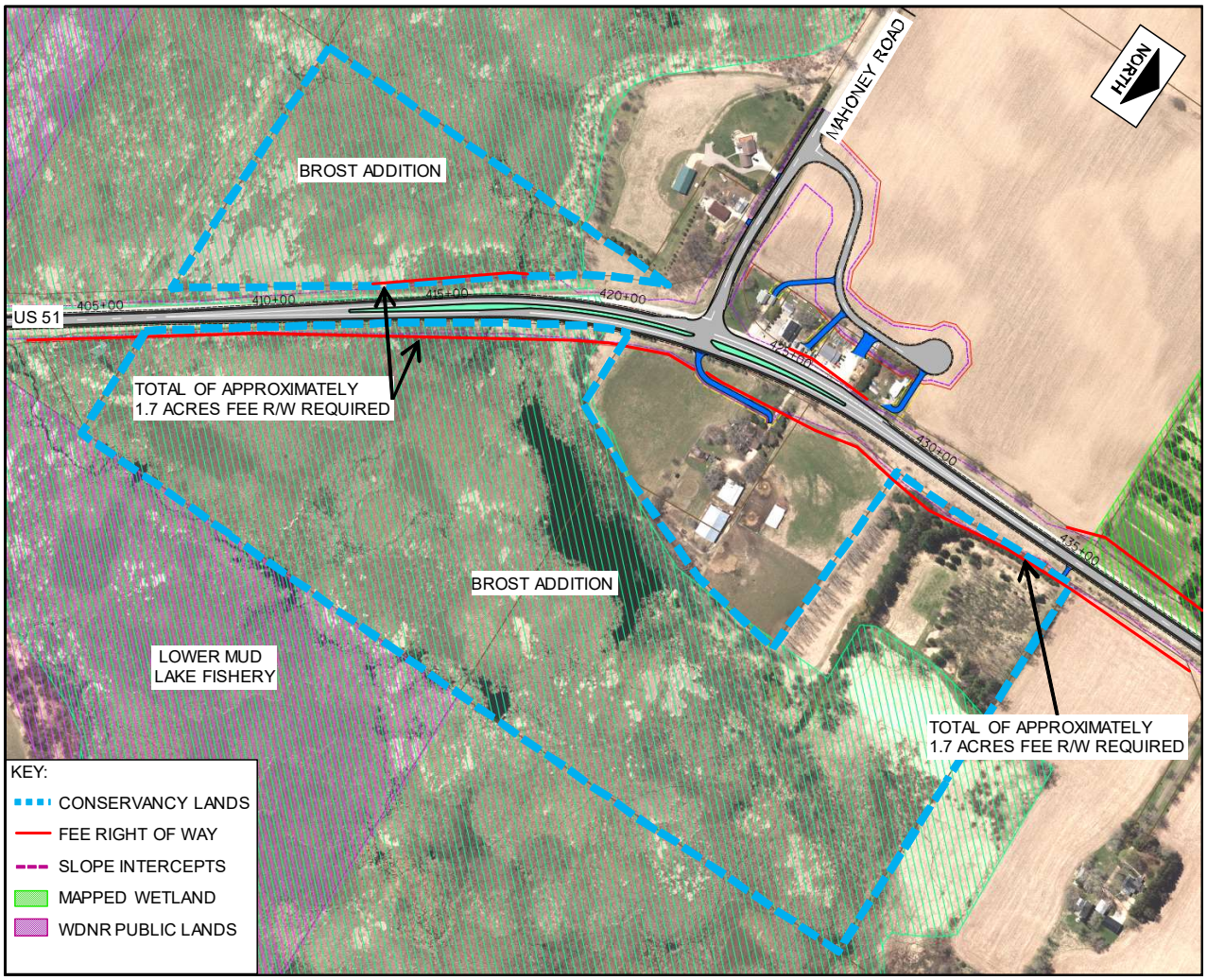


Figure B-8.17 Brost Addition to Mud Lake

9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:

- ☐ Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- ☐ The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- ☐ Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- ☒ Restoration and landscaping of disturbed areas.
- ☐ Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the section 4(f) property.
- ☐ Payment of the fair market value of the land and improvement taken.
- ☐ Improvements to the remaining 4(f) site equal to the fair market value of the land and improvements taken.
- ☐ Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- ☐ Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- ☐ Other–Describe:

10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:

(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

~~Coordination with WDNR and Groundswell Conservancy is ongoing and potential mitigation measures for the anticipated impacts to the Brost Addition are being evaluated~~. Coordination with WDNR and Groundswell Conservancy is ongoing and potential mitigation measures discussed to date that are under consideration consist of construction of an improved access and parking area, signage, potential water access enhancements and/or other property enhancements. Mitigation measures will be finalized following real estate appraisals to determine total value of required mitigation.

AESTHETICS EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-9

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Landscape Characteristics:

a. Identify and briefly describe the visual character of the landscape:
In the rural areas of the study corridor, east of Stoughton and between Stoughton and McFarland, the landscape views are generally of rural residential homes, farms, agricultural fields, streams, rivers, lakes, and isolated woodlands and wetlands. Within the urban areas of Stoughton and McFarland, the visual character is of the typical small town residential neighborhoods, parks, commercial or retail areas, and some industries.

b. Indicate the visual quality of the view-shed and identify landscape elements which would be visually sensitive:
For a corridor that includes a mix of both rural countryside and small communities, the visual quality of the US 51 study corridor viewshed is above average. The more visually appealing and sensitive landscape elements would include: the rural woodlands; wetlands and stream crossings; the two crossings of the Yahara River; views of Lake Kegonsa, Lower Mud Lake and Lake Waubesa; Coachman's Golf Course east of Stoughton; Stoughton's downtown area with historic districts; and Babcock Park in McFarland.

2 User/viewer Characteristics:

b. Identify and discuss the viewers who will have a <u>view of</u> the improved transportation facility:
Viewers who would have a view of the improved facility would include: local residents, local business owners and their employees; patrons of the local businesses; and tourists that visit the local parks, lakes, and streams and recreation areas. For those people whose residence, business or workplace, or destination is located on US 51, these viewers would have a view of the improved facility.

c. Identify and discuss users of the transportation facility who will have a <u>view from</u> the facility:
Throughout the majority of the study corridor, travelers on US 51 will not see any substantial changes to the view from the facility. These travelers would include: local residents, commuters; local business owners and their employees; patrons of the local businesses; and tourists that visit the local parks, lakes, and streams and recreation areas.

3. Effects:

a. Describe whether and how the project would affect the visual character of the landscape:
It is anticipated that the proposed action will not affect the visual character of the US 51 study corridor landscape. The reconstruction of the existing 2- to 4-lane facility is entirely on the existing alignment. The intersection improvements, roundabouts, and new median in some rural sections, will not affect the visual character of the rural areas east of Stoughton or between Stoughton and McFarland.

One small section of the roadway on the west side of Stoughton from near Jackson Street to County B (east) will be expanded from 2- to 4-lanes, but this area is a commercial retail area that is developed or planned for development. Throughout the majority of the study corridor, travelers on US 51 will not see any substantial changes to the view from the facility. These travelers would include: local residents, local business owners and their employees: patrons of the local businesses; and tourists that visit the local parks, lakes, and streams and recreation areas.

b. Indicate the effects the project would have on the viewer groups:

<u>Viewers with a view of the improved facility</u>.
These viewers will see a reconstructed facility on existing alignment with areas of new median, some reconstructed intersections with new turn bays, and new roundabouts at several intersections. Those residing in the residential area east of Stoughton's downtown business, between Spring Road and the

railroad crossing, will have a view of grass terraces widened from 5 to 8 feet on each side of the road. The wider terrace provide space for Stoughton to plant trees.

Users of the Babcock Park campground area will have a reduced view of US 51. A screening wall will provide a visual screening of the US 51 highway for Babcock Park users. The height of the screening wall will be determined in consultation with Dane County Parks. The wall will extend from the Babcock Park shower building to Burma Road. WisDOT may provide some aesthetic and informational provisions on the screening wall that would be visible to park users. WisDOT will coordinate these items with Dane County Parks.

Viewers with a view from the improved facility.
Throughout the majority of the study corridor, travelers on US 51 will not see any substantial changes to the view from the facility. Views from the improved roadway could change over time as a result of potential new development at improved intersections. No change in aesthetics within Stoughton or McFarland are anticipated as existing decorative crosswalks, colored sidewalk panels, and lighting that are impacted would be replaced in kind. The project's D for C for Section 106 also specifies that these types of features located in Stoughton's historic districts would be replaced in kind. Some change in aesthetics within McFarland is anticipated in the vicinity of Babcock Park. Travelers on US 51 will see new way-finding signage to the park, campground, and boat launch. A screening wall will be used to provide a visual screening of the US 51 highway for Babcock Park users. This wall will change the view from the roadway, blocking the view of Babcock Park. The height of the screening wall will be determined in consultation with Dane County Parks. The wall will extend from the Babcock Park shower building to Burma Road.

Travelers on US 51 will also see other improvements to Babcock Park, including: a new crash barrier adjacent to the campground; new sidewalks and multiuse paths; new retaining walls; and a new pedestrian crossing from the overflow parking lot east of US 51 to the boat launch parking lot.

4. Mitigation:

a. Have aesthetic commitments been made?

☐ No
☒ Yes–Discuss:
Existing aesthetic features such as, but not limited to, decorative crosswalks, colored sidewalk panels, and lighting in Stoughton and McFarland impacted by the proposed action would be replaced in kind.

WETLANDS EVALUATION

Wisconsin Department of Transportation
(9/2013)

Factor Sheet C-1

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Describe Wetlands:

The project contains a mix of jurisdictional and isolated wetlands. Jurisdictional wetlands are under authority of the USACE and are also called Waters of the United States (WOUS). These areas represent relatively permanent, navigable waterways and wetlands that are adjoined to or influenced by the waterway. Wetland types on the project that are anticipated to be jurisdictional include riparian palustrine emergent (RPE), riparian palustrine forested (RPF), and some areas of wet meadow (M) and shrub swamp (SS) wetlands of floodplain wetland complexes. The project's isolated wetlands include more rural agricultural watersheds and farmed wetlands in the townships and more urbanized wetlands within hydric soil units in Stoughton, McFarland, and Madison. Wetland types on the project that are anticipated to be isolated include wet meadow or degraded wet meadow (M or M(D)), shallow marsh (SM), or farmed wetlands (FW). None of the isolated wetlands were identified to be of high quality.

Higher quality jurisdictional wetlands were identified within three areas of the corridor. These areas had noteworthy quality wetlands with some substantial floristic, functional, or wildlife habitat values. The areas are:

(1) Lake Kegonsa Tributary Drainages–Cold water drainages, seeps, and native wet prairie communities west of Lake Kegonsa between Lake Kegonsa Drive and Halverson Road.
(2) Keenans Creek–Large cool-warm headwater, floodplain marsh wetland complex (Lower Mud Lake backwater).
(3) Exchange Street Marsh–Privately owned wetland complex with adjoining restored uplands west of Exchange Street.

Wetland areas impacted by the proposed action were field delineated in July and August 2013. As noted, eight types of wetlands are present on the project. These wetland types include all ranges of wetlands from the Yahara River to farmed wetlands and forested wetlands. Depending on location and land ownership and management, the wetlands can be expansive (such as the Upper Mud Lake wetland complex associated with Keenans Creek) or small (channelized farmed wetland ditches). The delineated wetland types and wetland loss (wetlands within the project slope intercept, located within and outside existing R/W) are shown on the wetland mapping in Appendix N. The delineated wetlands impacted by Alternative H are summarized in Table C-1.1.

Table C-1.1 Wetlands

Wetland I.D.[1]	Location (Twn-Range-Sec)	Wetland Type(s)[2]	Wetland Loss (acres)	Isolated Wetland	Within 5-Year Floodplain	Name and Location of Waterbody adjacent or contiguous to wetland
1	05-12-05	M(D)	0.12	No	No	Not adjacent or contiguous
2	05-12-08	M(D)	0.06	No	No	Not adjacent or contiguous
3	05-12-05	RPE	0.14	No	Yes	Saunders Creek
4	05-12-08	RPE	0.05	No	Yes	Saunders Creek
5	05-12-05	M(D)	0.06	No	No	Not adjacent or contiguous
7	05-12-06	RPE/SM	0.32	No	Yes	Unnamed
8	05-12-07	M(D)	0.06	No	Yes	Not adjacent or contiguous
9	05-12-07	RPE/M/SS	0.28	No	Yes	Unnamed
10	05-12-06	M	0.14	No	No	Not adjacent or contiguous
11	05-11-02	RPE/M(D)	0.01	No	No	Unnamed
12	05-11-11	RPE/M(D)	0.01	No	No	Unnamed
13	05-11-11	RPE/M(D)	0.01	No	No	Unnamed
16	05-11-10	RPE/M	0.03	No	No	Not adjacent or contiguous
19	05-11-06	M(D)	0.04	Yes	No	Not adjacent or contiguous

Wetland I.D.[1]	Location (Twn-Range-Sec)	Wetland Type(s)[2]	Wetland Loss (acres)	Isolated Wetland	Within 5-Yr Floodplain	Name and Location of Waterbody adjacent or contiguous to wetland
20	06-11-31	M(D)	0.12	Yes	No	Not adjacent or contiguous
21	06-10-36	M(D)	0.21	Yes	No	Not adjacent or contiguous
23a	06-10-25	RPE/RPF	0.17	No	Yes	Lake Kegonsa Trib. No. 1
23b	06-10-25	RPE/RPF	0.11	No	Yes	Lake Kegonsa Trib. No. 1
23c	06-10-25	RPE/RPF	0.28	No	Yes	Lake Kegonsa Trib. No. 1
24	06-10-26	RPF/RPE	0.06	No	Yes	Lake Kegonsa Trib. No. 1
25	06-10-26	M/SS/WS	0.97	No	No	Not adjacent or contiguous
26	06-10-26	RPE/SS/RPF	0.74	No	Yes	Lake Kegonsa Trib. No. 2
27	06-10-26	RPF	0.35	No	Yes	Not adjacent or contiguous
28	06-10-26	WS/SS/M	0.38	No	Yes	Not adjacent or contiguous
29	06-10-26	AB-M/SS/WS	1.01	No	Yes	Lake Kegonsa Trib. No. 3
30	06-10-26	AB-RPE/SM/ RPF	0.21	No	Yes	Lake Kegonsa Trib. No. 3
32	06-10-15	M(D)	0.01	Yes	No	Not adjacent or contiguous
33	06-10-15	RPE/M/SS	0.27	No	Yes	Kennan's Creek
34	06-10-15	RPE/M/SM	0.91	No	Yes	Kennan's Creek
35	06-10-09	SM/RPE/WS	0.71	No	Yes	Not adjacent or contiguous
36	06-10-10	M	0.12	Yes	No	Not adjacent or contiguous
37	06-10-10	M(D)	0.13	No	No	Not adjacent or contiguous
38	06-10-03	AB/RPE/RPF	0.04	No	Yes	Yahara River
39	06-10-03	M	0.01	Yes	No	Not adjacent or contiguous
45	07-10-34	M(D)	0.23	No	No	Not adjacent or contiguous
Total Wetland Loss			**8.37**			

Note: Only the delineated wetlands impacted by Alternative H are listed in this table.

[1] Wetland numbering from the project wetland delineation report and wetland mapping in Appendix N.

[2] Use wetland types as specified in the "*WisDOT Wetland Mitigation Banking Technical Guideline, Table 3-C" http://dotnet/dtid-bees/extranet/environment/documents/wetlands/wetlandmitigation*

2. Are any impacted wetlands considered "wetlands of special status" per WisDOT Wetland Mitigation Banking Technical Guideline, page 10 (6 categories)?

☒ No

Based on the wetland types, review of resource mapping and aerial photographs, the 2013 field delineation of wetlands, and review of WDNR project correspondence, no wetlands of special status were identified. The wetland types located along the corridor and specifically the US 51/Lake Kegonsa Road wetland drainages were field-reviewed by WDNR/WisDOT project managers on September 7, 2012. Full field delineation of the cold-water drainages and less disturbed wetlands far-west in this Lake Kegonsa watershed area were field delineated and assessed in summer 2013. Based upon the limited off-alignment project acquisitions and impacts of the proposed roadway it does not appear there are any impacted special status wetlands. Final agency coordination will confirm whether this initial finding is accurate. The following items from the WisDOT Wetland Mitigation Banking Technical Guideline may potentially apply to some wetlands:

- (Item 4) Threatened/Endangered Species
  WDNR reports a rare plant species may be present near Lake Kegonsa Road.

- (Item 5) Protected, Restored, or Managed Wetlands
  No public or private lands that may have involved restored or protected lands will be acquired. No Section 4(f) or Section 6(f) lands involve wetlands.

- (Item 6) Archeological Sites
  No wetlands are located on known listings of historic or archeological sites.

☐ Yes:

- ☐ Advanced Identification Program (ADID) Wetlands
- ☐ Public or private expenditure has been made to restore, protect, or ecologically manage the wetland on either public or private land
- ☐ Other–Describe: _____

3. **Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other:**
General grading and filling for reconstruction of the existing roadway and intersection improvements will result in impacts to wetlands. Changes to drainageways and culverts may affect wetland hydrology and seasonality. Final design plans will continue to assess avoidance and minimization opportunities to clarify the needed extent of resource protection, excavation, and fill.

4. **List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland:** (List should include permanent, migratory and seasonal residents).
The US 51 project adjoins substantial wetlands within the Southeast Glacial Plains Ecological landscape. Based on the diversity and extent of the habitat along the project corridor, the jurisdictional and isolated wetlands throughout the corridor serve as habitat for a variety of plants and animals including reptiles, amphibians, migratory waterfowl, songbirds, shorebirds, and raptors as well as small mammals, common furbearers, and deer. Large mammals such as deer find refuge in wetlands while an abundance of other animals, plants, invertebrates are found in the diverse habitats that wetlands provide. Species potentially present or those that could be expected is dependent on the proximity of adjacent wetlands. Because the project is an on-alignment reconstruction, the multitude of wetland habitat types will not be separately severed or impacted in substantial manner. Although there may be varying permanent, seasonal, or migrant residents of the wetland communities, the level of the road improvement has the opportunity to impact the species to a lesser degree than an off-alignment or capacity expansion project. Species that may be dependent or found in the wetland corridors include: American toads, Cope's Gray tree frog, leopard frogs, western chorus frogs, Eastern Grey frogs, green frogs, and wood frogs, central newts, tiger salamanders, snapping turtles and painted turtles, and various species of garter snakes including bull snakes and Eastern hognose snakes. Added to these species will be the terrestrial species that find permanent or seasonal refuge in wetlands.

In a letter dated January 18, 2011, the WDNR indicated the following observed or expected waterfowl and wildlife inhabited or depended upon the Lower Mud Lake Wetland Complex (Wetland I.D. 33 and 34) near the Keenans Creek crossing of US 51:

a. The wetland provides groundwater recharge and flood water storage and is a fishery and waterfowl habitat. Observed or expected waterfowl include mallard, teal, widgeon, gadwall, wood duck, scaup, goldeneye, canvasback, redhead, ring neck, ruddy, bufflehead, merganser, loon, goose, swan, and other species.
b. Lower Mud Lake is used extensively by migrating waterfowl and the open water area of Lower Mud Lake is an important resting area for migrating waterfowl in the spring. Because the water opens early on the river, the area is especially good for early migrating waterfowl.

The WDNR letter also indicates the wetlands provide critical fish habitat and spawning grounds for fish in Lower Mud Lake and the Yahara River. Northern pike move upstream from Lake Kegonsa to spawn in these wetlands. Walleye are also present in this area during spawning season. Longnose gar, Bow fin, Brook silverside, and deep water drum and warm water game and forage fish are all found in the area.

Separate from the WDNR comments, it is noted that the Lake Kegonsa Drainages that originate west of US 51 at the curve areas between Lake Kegonsa Drive and Halverson Road contain a mixture of habitat that will support similar species dependent on the permanent water complex of Lake Kegonsa to the east.

5. Federal Highway Administration (FHWA) Wetland Policy:

☐ Not Applicable–Explain

☒ Individual Wetland Finding Required–Summarize why there are no practicable alternatives to the use of the wetland.

The full on-alignment reconstruction of US 51 will cause impacts that exceed the requirements for a Statewide Wetland Finding because approximately 8.4 acres of delineated wetlands will be impacted. An Individual FHWA Wetland Finding is required with more than 7.4 acres of wetland impacted. Compliance with EO 11990 (23 CFR 771.125(a)(1)) requirements is also required. Future coordination with WDNR and USACE will be completed before applying for the Individual Wetland Finding. The study team anticipates that the Individual Wetland Finding will be finalized before the completion of NEPA.

During preliminary design and alignment refinement, considerable effort was devoted to avoiding and minimizing wetland impacts and all practicable measures to minimize harm to wetlands were taken. The proposed action is the reconstruction of a 2-lane and 4-lane highway, primarily on existing alignment. The majority of bounding lakes, rivers, streams, and wetlands on the project corridor will be impacted to a lesser degree with the proposed action (on-alignment reconstruction) than would be anticipated with an off-alignment and/or more extensive capacity expansion alternative. There are no practicable alternatives that fully avoid wetlands while also providing the level of improvement needed for the project. Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

☐ Statewide Wetland Finding: **NOTE: All three boxes below must be checked for the Statewide Wetland Finding to apply.**

- ☒ Project is either a bridge replacement or other reconstruction within 0.3 miles of the existing location.
- ☐ The project requires the use of 7.4 acres or less of wetlands.
- ☒ The project has been coordinated with the WDNR and there have been no significant concerns expressed over the proposed use of the wetlands.

6. Erosion control or storm water management practices which will be used to protect the wetland are indicated on form: (Check all that apply)

☒ Factor Sheet D-6, Erosion Control Evaluation.
☒ Factor Sheet D-5, Stormwater Evaluation.
☐ Neither Factor Sheet–Briefly describe measures to be used

7. U S Army Corps of Engineers (USACE) Jurisdiction–Section 404 Permit (Clean Water Act)

☐ Not Applicable–No fill to be placed in wetlands or wetlands are not under USACE jurisdiction.
☒ Applicable–Fill will be placed in wetlands under the jurisdiction of the USACE.
Indicate area of wetlands filled: Acres 8.4
Type of 404 permit anticipated:

- ☒ Individual Section 404 Permit required.
- ☐ General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.
  Indicate which GP or LOP is required:
  - ☐ **Non-Reporting GP** [GP-002-WI (*expires 5/31/16*) or GP-004-WI (*expires 12/31/17*)]
  - ☐ **Reporting GP** [GP-002-WI, GP-003-WI (*expires12/31/17*), or GP-004-WI]
  - ☐ **Letter of Permission** [LOP-06-WI (*in effect 4/17/06, no expiration date*)]
  - ☐ **Programmatic GP** [Applies to projects not covered under the DOT/DNR Cooperative Agreement]

8. Wisconsin Department of Natural Resources Coordination–Section 401 Water Quality Certification

☐ WDNR has provided concurrence on the project wetland delineation. Received on: (Date)
☒ Other- Explain
Coordination is ongoing. The wetland delineation report was submitted to USACE and WDNR on December 12, 2015.

9. Section 10 Waters (Rivers and Harbors Act). For navigable waters of the United States (Section 10) indicate which 404 permit is required:

☒ No Section 10 Waters
☐ Section 10 Waters

☐ **Reporting GP** [GP-003-WI (*expires12/31/17*)]
☐ **Reporting GP** [GP-004-WI (*expires 12/31/17*)]

Indicate whether Pre-Construction Notification (PCN) to the USACE is:

☐ Not applicable.
☐ Required: Submitted on: (Date)

Status of PCN
USACE has made the following determination on: (Date)
USACE is in the process of review, anticipated date of determination is: (Date)

10. Wetland Avoidance and Impact Minimization: [Note: Required before compensation is acceptable]

A. Wetland Avoidance:

1. Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.:
The proposed action is limited to on-alignment, 2-lane reconstruction and intersection improvements in areas with wetlands. The preliminary design refinements (including providing guardrail and steeper side slopes) of the on-alignment, 2-lane reconstruction reduced wetland impacts to approximately 8 acres. Design elements near waterways such as WDNR-owned Keenans Creek, two Yahara River crossings, and wetlands near Lake Kegonsa Road also avoid wetland impacts. During final design, efforts to avoid impacts will continue.

2. Indicate the total area of wetlands avoided:
Acres: Approximately 8 acres.

B. Minimize the amount of wetlands affected:

1. Describe methods used to minimize the use of wetlands, such as increasing side slopes or use of retaining walls or guardrail, equalizer pipes, upland disposal of hydric soils, etc.:
Preliminary design has modified the roadway typical cross section (use of steeper slopes) and evaluated guardrail to reduce wetland impacts at several locations. Medians have been retained where design standards require the separation, typically near intersections. Slope adjustments and placement of guardrail in wetland sections west of Lake Kegonsa also reduced impacts by approximately 1 acre.

To minimize impacts at the Keenans Creek waterway crossing and associated wetlands, the existing grade of 4 percent will be maintained. The roadway profile in this area would normally require a 3 percent grade from the high points to low point in the wetland to meet current design standards. Using a 4 percent grade will maintain the existing profile, minimize fill through the floodplain, and reduce wetland impacts by approximately 0.3 to 0.5 acres. Preliminary approval by FHWA and WisDOT in February 2016 was obtained for this design exception. During final roadway design, the project team will seek final approval for a design exception for this grade.

The December 23, 2010 WDNR project letter requested that a bridge be considered at the south end of the Keenans Creek crossing to provide for a navigable crossing and to provide for improved aquatic species passage. The proposed bridge over Keenans Creek is included in Alternative H. The use of a bridge may reduce wetland impacts through: (1) removal of some existing roadway fill and

spanning the existing culvert area; and (2) potentially by requiring guardrail, steepened side slopes, and reduction of slopes beyond the clear zone. Preliminary design has not estimated the resulting wetland impact minimization.

2. Indicate the total area of wetlands saved through minimization:
   Acres: Approximately 1 to 2 acres.

11. Compensation for Unavoidable Wetland Loss:

According to Section 404(b)(1), of the CWA, wetland compensatory mitigation procedures and sequencing will conform to USACE and USEPA joint rule on Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332; and 40 CFR Part 230–dated April 10, 2008). Compensatory mitigation will be consistent with amendments to the Cooperative Agreement between WDNR and WisDOT on compensatory mitigation for unavoidable wetland losses (July 2012), and the WisDOT Interagency Coordination Agreement and Wetland Mitigation Banking Technical Guidelines with WDNR, USACE, USEPA, USFWS, and FHWA (March 2002).

	Type	Acre(s) Loss	Ratio	Compensation Type and Acreage	
				On-site	Bank Site
RPF(N)	Riparian wetland (wooded)	0.41	1.5 : 1		0.62
RPF(D)	Degraded riparian wetland (wooded)				
RPE(N)	Riparian wetland (emergent)	3.33	1.3 : 1		4.33
RPE(D)	Degraded riparian wetland (emergent)				
M(N)	Wet and sedge meadows, wet prairie, vernal pools, fens	1.24	1:1		1.24
M(D)	Degraded meadow	1.04	1:1		1.04
SM	Shallow marsh	0.71	1:1		0.71
DM	Deep marsh				
AB(N)	Aquatic bed	1.26	1:1		1.26
AB(D)	Degraded aquatic bed				
SS	Shrub Swamp, shrub carr, alder thicket				
WS(N)	Wooded swamp	0.38	1:1		0.38
WS(D)	Degraded wooded swamp				
Bog	Open and forested bogs				
	TOTAL	**8.37**			**9.58**

D = Degraded
N = Nondegraded
Wetland types were determined by the first type listed in Table C-1.1 and could vary during final design.

12. If compensation is not possible within the drainage area and floristic province thru the use of the DOT mitigation bank, explain why and describe how a search for an on-site compensation site was conducted:

WisDOT and WDNR have completed watershed-based wetland mitigation and restoration studies for south central Wisconsin. Prospective wetland mitigation sites were documented by these studies. For this project, WisDOT plans to direct unavoidable wetland impacts to the World Dairy Center Wetland Mitigation Bank Site on the east side of Madison. The site is within the Lower Rock River 8-Digit Hydrologic Unit Code (HUC) Watershed (No. 07090002). This is a suitable in-watershed replacement, because the US 51 project spans three 10-Digit HUC watersheds. They are: (1) Lake Monona and Yahara River Watershed; (2) Yahara River and Lake Kegonsa Watershed; and (3) Lower Rock and Lake Koshkonong Watersheds. The World Dairy Center site received its initial wetland credit release in 2016. The site will have mitigation credits available as Section 404 Permits are authorized before construction.

13. Summarize the coordination with other agencies regarding the compensation for unavoidable wetland losses. Attach appropriate correspondence.

Coordination for unavoidable wetland losses will be completed for the final plans. Differences from the previous discussions are not anticipated because agency coordination has been ongoing since 2008 with the first agency field review of the study corridor. Any changes to impacts or necessary mitigation ratios and locations will be determined using the Wetland Mitigation Banking Technical Guidelines, consistent with regulations by USACE and USEPA.

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

There are five river, stream, or creek crossings of the US 51 study corridor that are proposed for reconstruction as part of Alternative H. A sixth crossing, the Main Street bridge over the Yahara River in Stoughton, would not be reconstructed but could be rehabilitated to extend the structure life. Figure C-2.1 shows the general location of each crossing. Appendix N maps show these crossings in more detail, as well as wetland delineations. The five crossings affected by proposed Alternative H construction are described below in south to north order.

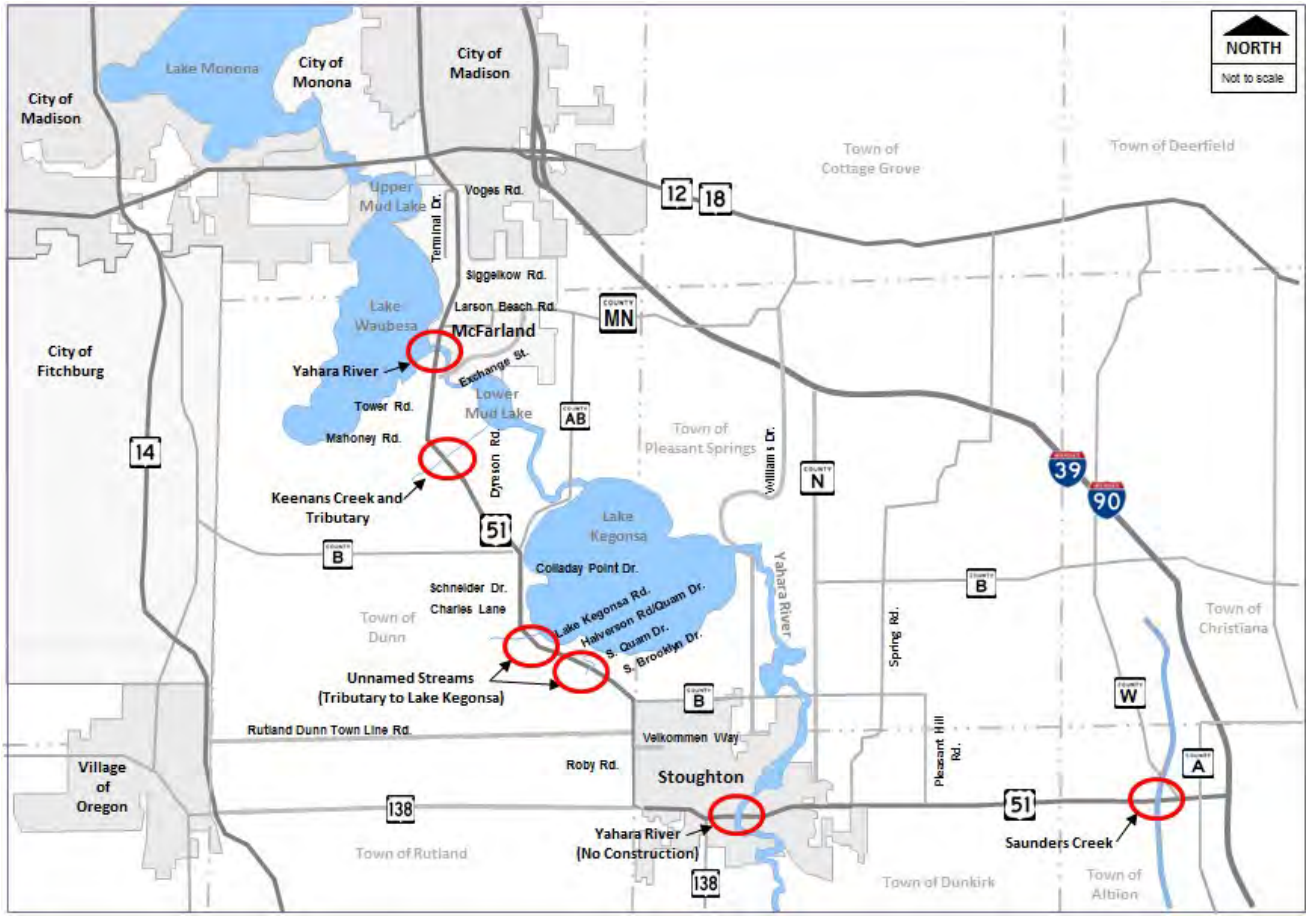


Figure C-2.1 River, Stream, and Creek Crossings

1. **Stream Name:** **<u>Saunders Creek (see Appendix N, Sheet 3)</u>**
   Crosses US 51 east of Stoughton approximately 1,600 feet west of County W (Station 330+00).

2. **Stream Type: (Indicate Trout Stream Class, if known)**

   ☐ Unknown
   ☒ Warm water
   ☒ Cold water: WDNR Natural Community Modeling class cool, cold headwater.
   If trout stream, identify trout stream classification: _____
   ☐ Wild and Scenic River

3. Size of Upstream Watershed Area: (Square miles or acres)
Saunders Creek is within the Lower Koshkonong Creek Watershed. According to information from the WDNR website and the WDNR Water Detail sheet for Saunders Creek, Saunders Creek is a meandering creek with a low gradient that drains approximately 36 square miles of agricultural land. Reportedly, parts of the creek have been ditched and wetlands drained in its watershed and polluted runoff from pastures and barnyards and erosion from fields carry sediments to the creek and affect overall water quality.

4. Stream flow characteristics:

☒ Permanent Flow (year-round)
☐ Temporary Flow (dry part of year)

5. Stream Characteristics:

A. Substrate:

1. ☐ Sand
2. ☒ Silt
3. ☐ Clay
4. ☐ Cobbles
5. ☒ Other-describe: Muck

B. Average Water Depth: Unknown

C. Vegetation in Stream

☐ Absent
☒ Present–If known describe: reed canary grass, rice cat grass, bullrush, cattail, and filamentous algae.

D. Identify Aquatic Species Present:
Northern pike spawn in its associated marshes. Some pan fish and many species of forage fish also inhabit the creek. Fish species include central mudminnow, central stoneroller, common carp, brassy minnow, hornyhead chub, common and bigmouth shiner, northern redbelly dace, bluntnose and fathead minnow, creek chub, pearl dace, white sucker, black bullhead, stonecat, brook stickleback, green sunfish, fantail, and johnny darter.

E. If water quality data is available, include this information:
Polluted runoff from pastures and barnyards and erosion from fields carry sediments to the stream. No other information is known on the water quality of Saunders Creek.

F. Is this river or stream on the WDNR's "Impaired Waters" list?

☒ No
☐ Yes–List:

6. If bridge or box culvert replacement, are migratory bird nests present?

☐ Not Applicable
☒ None identified
☐ Yes–Identify Bird Species present
Estimated number of nests is:

Migratory bird nests were not identified on September 7, 2012 in the two, 12-foot by 6-foot box culverts at Saunders Creek. Inspection of bridges and culverts for nests will occur closer to the time of construction.

Mitigation measures followed if migratory bird nests are found would likely include the following:
a. Demolition of existing structure(s), if needed, will occur outside the species' nesting season.
b. Nests will be removed before the nesting season, or other means will be implemented to prevent nesting such as placement of netting on the existing structure before the nesting season.

7. **Is a Fish & Wildlife Depredation Permit required to remove swallow nests?**

☐ Not Applicable
☒ Yes
☐ No–Describe mitigation measures:

Migratory bird nests may be present at Saunders Creek in the future but September 7, 2012 observations identified no nests. A USFWS Depredation Permit will be required to remove migratory bird nests if they exist in the future and if demolition of structures will take place during the nesting season and mitigation measures noted in question 6 cannot be accomplished.

8. **Describe land adjacent to stream***:*
Adjacent land is a golf course, farmland, farmed wetland, and wetland.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**
None identified within 0.5 miles.

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

Work over Saunders Creek would involve reconstruction of the existing 2 lanes from I-39/90 to Stoughton. Currently, Saunders Creek flows beneath US 51 through two, 12-foot by 6-foot concrete box culverts that are approximately 129 feet in length. Box culverts would be replaced. Resizing would be considered during final design.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**
The project is not at a design stage advanced enough to determine the effects to backwater. This determination will be completed for the proposed action during final design and will be consistent with NR 116 and 23 CFR 650 Subpart A. The final design will result in no additional backwater as crossing structures will be designed to pass the flows within the 100-year floodplain.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**
No specific floodplain impact coordination has occurred with any floodplain zoning authority. Floodplain maps were checked to determine the location, amount, and type of floodplain encroachment. Coordination with the floodplain zoning authority (Dane County) will be completed for the proposed action during final design.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**
The proposed action is not at a design stage advanced enough to determine changes in the design flood or backwater impacts. This determination will be completed during final design. However, the proposed action will not result in significant encroachment or any support of incompatible floodplain development. Based on the basin and depression topography of the area, it is anticipated that water level effects of Lake Kegonsa would have the most influence on the hydrology and backwater effects in the area.

☒ No impacts would occur.
☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
☐ Significant flooding with a potential for property loss and a hazard to life.
☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**
The risks associated with implementation of the action are low and the anticipated impacts on natural and beneficial floodplain values will not be significant. The floodplain of Saunders Creek is currently severed by existing US 51. The associated wetland extends west from the crossing approximately 123 feet and

approximately 407 feet east. The existing floodplain and wetland complex is not bridged by US 51, but instead two, 12-foot by 6-foot box culverts currently provide the hydraulic connection between the wetlands located to the north and south of US 51. The floodplain will remain in the same state as before construction or conditions will be improved with the replacement box culverts and resizing will be considered during final design. There will be no potential floodplain impacts associated with the action. The replacement culverts will preserve the natural and beneficial floodplain values. The proposed action will not support incompatible floodplain development.

Highway improvements planned at Saunders Creek are limited to the reconstruction of the existing 2-lane roadway pavement, shoulders, and ditches, as needed, to meet design standards.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

Exposed soils during and after construction have the potential for erosion into environmentally sensitive areas such as streams and wetlands. Soil types, existing drainage patterns, terrain, and the extent and duration of highway construction influence the degree to which erosion could occur at a particular location. Use of strict erosion control measures before, during, and after construction will minimize the potential for erosion impacts at waterways, wetlands, and environmental corridors.

Water quality impacts during construction could impact animals and fish inhabiting or dependent upon the stream. In order to protect developing fish eggs and substrate for aquatic organisms, all instream work that could adversely impact water quality will not be undertaken between March 1 and June 15. WisDOT specifications will address restoration and seed mixes to replace the vegetation removed as part of construction.

16. Are measures proposed to enhance beneficial effects?

☒ No
☐ Yes. Describe:

1. **Stream Name:** **Unnamed Stream, a tributary to Lake Kegonsa (see Appendix N, Sheet 11)**
   Crosses US 51 500 feet south of Halverson Road (Sta. 220+00).

2. **Stream Type: (Indicate Trout Stream Class, if known)**

   ☐ Unknown
   ☐ Warm water
   ☒ Cold water [observed artesian well at adjacent Sperloen farm discharges to this creek at 12 gallons per minute (gpm)]: WDNR Natural Community Modeling class cool-warm headwater.
   If trout stream, identify trout stream classification: _____
   ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**
   Approximately 1.5 square miles of Dunn farmland with some dense woods and wetland drain to this stream.

4. **Stream flow characteristics:**

   ☒ Permanent Flow (year-round)
   ☐ Temporary Flow (dry part of year)

5. **Stream Characteristics:**

   A. Substrate:

      1. ☒ Sand
      2. ☐ Silt
      3. ☐ Clay
      4. ☒ Cobbles
      5. ☐ Other-describe:

   B. Average Water Depth: 1 foot.

   C. Vegetation in Stream

      ☒ Absent Wet meadow shrub and forested lands are locating in the stream corridor.
      ☐ Present–If known describe:

   D. Identify Aquatic Species Present:
      Unknown.

   E. If water quality data is available, include this information:
      Water quality is subject to farming and residential land use surrounding the watershed.

   F. Is this river or stream on the WDNR's "Impaired Waters" list?

      ☒ No
      ☐ Yes–List:

6. **If bridge or box culvert replacement, are migratory bird nests present?**

   ☒ Not Applicable
   ☐ None identified
   ☐ Yes–Identify Bird Species present
   Estimated number of nests is:

   No nesting of migratory birds is anticipated at this crossing. The stream passes through a 72-inch concrete pipe. Inspection will occur closer to the time of construction.

   Mitigation measures followed if migratory bird nests are found will likely include the following:
   a. Demolition of existing structure(s), if needed, will occur outside the species' nesting season.

b. Nests will be removed before the nesting season, or other means will be implemented to prevent nesting such as placement of netting on the existing structure before the nesting season.

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable
☐ Yes
☐ No–Describe mitigation measures:

Migratory bird nests are not anticipated at this crossing. A USFWS Depredation Permit will be required to remove migratory bird nests if they exist and if demolition of structures will take place during the nesting season and mitigation measures noted in question 6 cannot be accomplished.

8. Describe land adjacent to stream*:*
Near this stream crossing of US 51, adjacent land is predominantly isolated woodland, wetland, and farmland with some scattered rural residential. Low cropland has reverted to wetland.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:
None identified within 0.5 miles.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The existing culvert pipe would be replaced. Resizing would be considered during design. This work would be within the 100-year floodplain.

11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:
The project is not at a design stage advanced enough to determine the effects to backwater. This determination will be completed for the proposed action during final design and will be consistent with NR 116 and 23 CFR 650 Subpart A. The final design will result in no additional backwater as crossing structures will be designed to pass the flows within the 100-year floodplain.

12. Describe and provide the results of coordination with any floodplain zoning authority:
No specific floodplain impact coordination has occurred with any floodplain zoning authority. Floodplain maps were checked to determine the location, amount, and type of floodplain encroachment. Coordination with the floodplain zoning authority (Dane County) will be completed for the proposed action during final design.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

The proposed action is not at a design stage advanced enough to determine changes in the design flood or backwater impacts. This determination will be completed during final design. However, the proposed action will not result in significant encroachment or any support of incompatible floodplain development. Based on the basin and depression topography of the area, it is anticipated that water level effects of Lake Kegonsa would have the most influence on the hydrology and backwater effects in the area.

☒ No impacts would occur.
☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
☐ Significant flooding with a potential for property loss and a hazard to life.
☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**
The risks associated with implementation of the action are low and the anticipated impacts on natural and beneficial floodplain values will not be significant. The floodplain associated with this stream adjacent to US 51 improvements will remain as natural habitat and wetlands in a similar state as before construction or conditions will be improved with the replacement box culvert and resizing evaluated during final design. There will be no potential floodplain impacts associated with the action. The replacement culvert will preserve the natural and beneficial floodplain values. The proposed action will not support incompatible floodplain development.

Highway improvements planned are limited to reconstruction of the existing 2-lane roadway pavement, shoulders, and ditches, as needed, to meet design standards. The reconstruction will be on existing alignment with a proposed median for development of left-turn lanes at adjacent intersections

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**
Exposed soils during and after construction have the potential for erosion into environmentally sensitive areas such as streams and wetlands. Soil types, existing drainage patterns, terrain, and the extent and duration of highway construction influence the degree to which erosion could occur at a particular location. Use of strict erosion control measures before, during, and after construction will minimize the potential for erosion impacts at waterways, wetlands, and environmental corridors.

Water quality impacts during construction could impact animals and fish inhabiting or dependent upon the stream. In order to protect developing fish eggs and substrate for aquatic organisms, all instream work that could adversely impact water quality will not be undertaken between March 1 and June 15. WisDOT specifications will address restoration and seed mixes to replace the vegetation removed as part of construction.

16. **Are measures proposed to enhance beneficial effects?**

☒ No
☐ Yes. Describe:

1. **Stream Name:** **Unnamed Stream, a tributary to Lake Kegonsa (see Appendix N, Sheet 11)**
   Crosses US 51 750 feet north of Lake Kegonsa Road (Sta. 262+00).

2. **Stream Type: (Indicate Trout Stream Class, if known)**

   ☐ Unknown
   ☐ Warm water
   ☒ Cold water: WDNR Natural Community Modeling class cold headwater.
   If trout stream, identify trout stream classification: _____
   ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**
   Approximately 2.3 square miles. Area is agricultural, woodland, and wetland drainage that flows to Lake Kegonsa.

4. **Stream flow characteristics:**

   ☒ Permanent Flow (year-round)
   ☐ Temporary Flow (dry part of year)

5. **Stream Characteristics:**

   A. Substrate:

      1. ☒ Sand
      2. ☒ Silt
      3. ☐ Clay
      4. ☐ Cobbles
      5. ☒ Other-describe: Muck

   B. Average Water Depth: 4 to 6 feet in channel near US 51.

   C. Vegetation in Stream

      ☐ Absent
      ☒ Present–If known describe: sedges, rushes, reed canary grass.

   D. Identify Aquatic Species Present:
      Warm water fish, brook stickleback, pike, and bullhead. The stream also likely supports water-dependent mammals such as muskrat and beaver, amphibians, and reptiles. Submerged and emergent wetland vegetation borders the stream. The area seasonally floods and contains muskrat lodges periodically. Shore birds and waterfowl also use the area.

   E. If water quality data is available, include this information:
      Water quality is subject to farming and residential land use surrounding the watershed.

   F. Is this river or stream on the WDNR's "Impaired Waters" list?

      ☒ No
      ☐ Yes–List:

6. **If bridge or box culvert replacement, are migratory bird nests present?**

   ☒ Not Applicable
   ☐ None identified
   ☐ Yes–Identify Bird Species present
   Estimated number of nests is:

   No nesting of migratory birds is anticipated at this crossing. The stream crosses through two 63-inch concrete pipes. Inspection would occur closer to the time of construction.

Mitigation measures followed if migratory bird nests are found will likely include the following:

a. Demolition of existing structure(s), if needed, will occur outside the species' nesting season.
b. Nests will be removed before the nesting season, or other means will be implemented to prevent nesting such as placement of netting on the existing structure before the nesting season.

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable
☐ Yes
☐ No–Describe mitigation measures:

Migratory bird nests are not anticipated at this crossing. A USFWS Depredation Permit would be required to remove migratory bird nests if they exist and if demolition of structures would take place during the nesting season and mitigation measures noted in question 6 cannot be accomplished.

8. Describe land adjacent to stream*:*
Near this stream crossing of US 51, adjacent land is predominantly wetland and isolated woodland with some scattered rural residential land use.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:
None identified within 0.5 miles.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The existing culvert pipes would be replaced. Resizing or additional pipes will be considered. This work will be within the 100-year floodplain.

11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:
The project is not at a design stage advanced enough to determine the effects to backwater. This determination will be completed for the proposed action during final design and will be consistent with NR 116 and 23 CFR 650 Subpart A. The final design will result in no additional backwater as crossing structures will be designed to pass the flows within the 100-year floodplain.

12. Describe and provide the results of coordination with any floodplain zoning authority:
No specific floodplain impact coordination has occurred with any floodplain zoning authority. Floodplain maps were checked to determine the location, amount, and type of floodplain encroachment. Coordination with the floodplain zoning authority (Dane County) will be completed for the proposed action during final design.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?
The proposed action is not at a design stage advanced enough to determine changes in the design flood or backwater impacts. This determination will be completed during final design. However, the proposed action will not result in significant encroachment or any support of incompatible floodplain development. Based on the basin and depression topography of the area, it is anticipated that water level effects of Lake Kegonsa would have the most influence on the hydrology and backwater effects in the area.

☒ No impacts would occur.
☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
☐ Significant flooding with a potential for property loss and a hazard to life.
☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:
The risks associated with implementation of the action are low and the anticipated impacts on natural and beneficial floodplain values will not be significant. The floodplain associated with this stream adjacent to US 51 improvements will remain as natural habitat and wetlands in a similar state as before construction or conditions will be improved with the replacement box culvert and resizing evaluated during final design. There will be no potential floodplain impacts associated with the action. The replacement culvert will preserve the natural and beneficial floodplain values. The proposed action will not support incompatible floodplain development.

Highway improvements planned are limited to reconstruction of the existing 2-lane roadway pavement, shoulders, and ditches, as needed, to meet design standards. The reconstruction will be on existing alignment with a proposed median for development of left-turn lanes at adjacent intersections.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:
Exposed soils during and after construction have the potential for erosion into environmentally sensitive areas such as streams and wetlands. Soil types, existing drainage patterns, terrain, and the extent and duration of highway construction influence the degree to which erosion could occur at a particular location. Use of strict erosion control measures before, during, and after construction will minimize the potential for erosion impacts at waterways, wetlands, and environmental corridors.

Water quality impacts during construction could impact animals and fish inhabiting or dependent upon the stream. In order to protect developing fish eggs and substrate for aquatic organisms, all instream work that could adversely impact water quality will not be undertaken between March 1 and June 15. WisDOT specifications will address restoration and seed mixes to replace the vegetation removed as part of construction.

16. Are measures proposed to enhance beneficial effects?

☒ No
☐ Yes. Describe:

1. **Stream Name:** **Keenans Creek and Keenans Creek Tributary (see Appendix N, Sheet 13)**
   Keenans Creek crosses US 51 in the wetland complex south of Mahoney Road. The creek is shown on the mapping in Appendix E and Appendix N. The Keenans Creek Tributary is not mapped but is located approximately 1,000-feet north of Keenans Creek. These two streams are located in the WDNR's Lower Mud Lake Fishery, which includes Keenans Creek, Keenans Creek floodplain, and the surrounding shallow marsh.

2. **Stream Type: (Indicate Trout Stream Class, if known)**

   ☐ Unknown
   ☒ Warm water: WDNR Natural Community Modeling class cool-warm headwater.
   ☐ Cold water
   If trout stream, identify trout stream classification: _____
   ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**
   Yahara River and Lake Kegonsa watershed is 126 square miles.

4. **Stream flow characteristics:**

   ☐ Permanent Flow (year-round)
   ☒ Temporary Flow (dry part of year)

5. **Stream Characteristics:**

   A. Substrate:

      1. ☐ Sand
      2. ☐ Silt
      3. ☐ Clay
      4. ☐ Cobbles
      5. ☒ Other-describe: Muck

   B. Average Water Depth: 6 inches
      The area has seasonal flooding events that fill the two 42-inch concrete pipes that allow Keenans Creek to flow under existing US 51 and the 54-inch pipe that allows the tributary to Keenans Creek to flow under existing US 51. The pipes hydraulically connect the wetland area currently severed by US 51.

   C. Vegetation in Stream

      ☐ Absent
      ☒ Present–If known describe:

      This stream has extents of muck and sand, vegetated with emergent plants and annual drawdown species including wild celery, pond weed bull rushes, sedges, cattails, shrubs, and exotic plants such as curly-leaf pondweed and Eurasian water milfoil.

   D. Identify Aquatic Species Present:
      Warm water fish, brook stickleback, pike, and bullhead. The stream also likely contains water-dependent mammals such as muskrat and beaver, amphibians, and reptiles. Submerged and emergent wetland vegetation borders the stream. The area seasonally floods and contains muskrat lodges periodically. Shore birds and waterfowl also use the area.

   E. If water quality data is available, include this information:
      The area is subject to the water conditions of the Yahara River watershed. Water quality information can be found using the same publications that are stated in the Yahara River description. Based on the large extent of row crop farming and dairy operations agricultural areas have the potential to contribute typical agricultural runoff to the watershed. There are some small well-buffered waterways and larger wetland complexes west of Lake Kegonsa that help buffer the localized runoff. There are some cold-water springs west of US 51 that help contribute to base flow and water quality. Sedimentation from flooding and runoff from agricultural fields are water quality concerns for the watershed.

F. Is this river or stream on the WDNR's "Impaired Waters" list?

☒ No
☐ Yes–List:

6. If bridge or box culvert replacement, are migratory bird nests present?

☐ Not Applicable
☒ None identified
☐ Yes–Identify Bird Species present
Estimated number of nests is:

It is unlikely that migratory birds nest in the two 42-inch concrete pipes carrying Keenans Creek or the 54-inch concrete pipe carrying the tributary to Keenans Creek across US 51. Construction of the proposed action would require a new culvert pipe at the tributary and a proposed bridge structure at Keenans Creek. Inspection of the culverts would occur closer to the time of construction.

Mitigation measures followed if migratory bird nests are found will likely include the following:

a. Demolition of existing structure(s), if needed, will occur outside the species' nesting season.
b. Nests will be removed before the nesting season, or other means will be implemented to prevent nesting such as placement of netting on the existing structure before the nesting season.

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?

☒ Not Applicable
☐ Yes
☐ No–Describe mitigation measures:

Migratory bird nests are not anticipated in the culverts at Keenans Creek. A USFWS Depredation Permit would be required to remove migratory bird nests if they exist and if demolition of structures would take place during the nesting season and mitigation measures noted in question 6 cannot be accomplished.

8. Describe land adjacent to stream*:*
Adjacent land is wetland. The area is a broad floodplain community of the Keenans Creek crossing and Lower Mud Lake Fishery wildlife area that is divided by the 2,200-foot linear encroachment of US 51 through the area.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:
None identified within 0.5 miles.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

This area is within the 100-year floodplain. The proposed action would reconstruct 2-lane US 51 between Stoughton to McFarland. Currently, Keenans Creek flows beneath US 51 through two 42-inch concrete culvert pipes. To improve creek flow conditions and the overall hydraulic connection between the severed wetland complex, the WDNR has recommended constructing a bridge over Keenans Creek. Bridge design has not been initiated, but improving the creek and wetland hydraulics and providing a wildlife crossing under the proposed bridge structure is planned.

The tributary to Keenans Creek, near the northern end of the wetland flows beneath US 51 through a 54-inch concrete pipe. The WDNR did not recommend bridging this creek. Evaluation of the existing culvert size and design of a replacement pipe for the 2-lane reconstruction will occur during final design.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**
The project is not at a design stage advanced enough to determine the effects to backwater. This determination will be completed for the proposed action during final design and will be consistent with NR 116 and 23 CFR 650 Subpart A. The final design will result in no additional backwater as crossing structures will be designed to pass the flows within the 100-year floodplain.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**
Mapped floodplains associated with Keenans Creek and the Yahara River border the project along US 51. No specific floodplain impact coordination has occurred with any floodplain zoning authority. Floodplain maps were checked to determine the location, amount, and type of floodplain encroachment. Coordination with the floodplain zoning authority (Dane County) will be completed for the proposed action during final design.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**

The proposed action is not at a design stage advanced enough to determine changes in the design flood or backwater impacts. This determination will be completed during final design. However, the proposed action will not result in significant encroachment or any support of incompatible floodplain development.

- ☒ No impacts would occur.
- ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- ☐ Significant flooding with a potential for property loss and a hazard to life.
- ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**
The risks associated with implementation of the action are low and the anticipated impacts on natural and beneficial floodplain values will not be significant. The floodplain of Keenans Creek and the Yahara River is currently severed by existing US 51. The wetland extends 2,200 feet south of Mahoney Road. The existing floodplain and wetland complex is not bridged by US 51. Three culverts currently provide the hydraulic connection between the wetlands located to the east and west of US 51. The floodplain associated with this wetland complex will remain as natural habitat and in a similar state as before construction, or conditions will be improved with the addition of a bridge at Keenans Creek. Conditions will also be improved by the replacement of culverts to the north of Keenans Creek, in the same wetland complex. The number and size of these culverts will be evaluated during final design. There will be no potential floodplain impacts associated with the action. The new bridge and replacement culvert(s) will preserve the natural and beneficial floodplain values. The proposed action will not support incompatible floodplain development.

Highway improvements planned at Keenans Creek are limited to reconstruction of the existing 2-lane roadway pavement, shoulders, and ditches on existing alignment. Construction will include constructing a bridge over Keenans Creek to increase the hydraulic connection between the currently bisected floodplain area. To the north, within this floodplain and wetland complex, culverts will be replaced and resizing or adding culverts will be evaluated.

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**
Exposed soils during and after construction have the potential for erosion into environmentally sensitive areas such as streams and wetlands. Soil types, existing drainage patterns, terrain, and the extent and duration of highway construction influence the degree to which erosion could occur at a particular location. Use of strict erosion control measures before, during, and after construction will minimize the potential for erosion impacts at waterways, wetlands, and environmental corridors.

Water quality impacts during construction could impact animals and fish inhabiting or dependent upon the stream. In order to protect developing fish eggs and substrate for aquatic organisms, all instream work that could adversely impact water quality will not be undertaken between March 1 and June 15. WisDOT

specifications will address restoration and seed mixes to replace the vegetation removed as part of construction.

16. Are measures proposed to enhance beneficial effects?

☐ No
☒ Yes. Describe:

Improvements planned at Keenans Creek include replacing the dual 42-inch concrete culvert pipes and constructing a single-span bridge to increase the hydraulic connection between the currently bisected floodplain area. This bridge will provide improved fish and animal passage in the existing marsh area. Fencing will also be evaluated with WDNR for installation in the area of the structure to help guide animals to pass under the proposed structure and not over US 51.

1. **Stream Name:** **Yahara River (see Appendix N, Sheet 8 and 15)**
   The Yahara River crosses US 51 just south of Yahara Drive in McFarland at the Lake Waubesa Dam and in Stoughton between Page Street and Water Street.

2. **Stream Type: (Indicate Trout Stream Class, if known)**

   ☐ Unknown
   ☒ Warm water
   ☐ Cold water
   If trout stream, identify trout stream classification: _____
   ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**
   Yahara River and Lake Kegonsa watershed is 126 square miles (east of US 51 in McFarland and north and south of US 51 in Stoughton).
   Yahara River and Lake Monona watershed is 85 square miles (west of US 51 in McFarland).

4. **Stream flow characteristics:**

   ☒ Permanent Flow (year-round)
   ☐ Temporary Flow (dry part of year)

5. **Stream Characteristics:**

   A. Substrate:

      1. ☒ Sand
      2. ☒ Silt
      3. ☐ Clay
      4. ☐ Cobbles
      5. ☐ Other-describe:

   B. Average Water Depth: 8 feet

   C. Vegetation in Stream

      ☐ Absent
      ☒ Present–If known describe:

      This stream has extents of muck and sand, vegetated with emergent plants and annual drawdown species including wild celery, pond weed bull rushes, sedges, cattails, shrubs, and exotic plants such as curly-leaf pondweed and Eurasian water milfoil.

   D. Identify Aquatic Species Present:
      It is expected the aquatic species in the Yahara River are similar to what have been reported in Lake Waubesa and Lake Kegonsa including lake sturgeon, longnose gar, bowfin, northern pike, muskellunge, common carp, emerald shiner, golden shiner, bluntnose minnow, fathead minnow, bigmouth buffalo, white sucker, channel catfish, yellow bullhead, black bullhead, brown bullhead, brook silverside, white bass, rock bass, green sunfish, pumpkinseed, bluegill, black crappie, white crappie, largemouth bass, smallmouth bass, logperch, Iowa darter, yellow perch, walleye, and freshwater drum. The river also contains water-dependent mammals such as muskrat and beaver, amphibians such as frogs, toads, and newts, crustaceans, freshwater mussels, insects, and numerous plant species.

   E. If water quality data is available, include this information:
      Extensive water quality information is available for the Yahara River Watershed. Several publications are available online and in hard copy form and were consulted to provide details on the Yahara River and Larger (Rock River) Watersheds and water quality. The Yahara River in Stoughton is on the state's 303(d) impaired waters list for chloride and Total Phosphorus. The Stoughton Wastewater Treatment Plant discharges to the Yahara River within a portion of the impaired section. The plant is located near Mandt Park and the Yahara River (south of US 51 in Stoughton). The Madison Metropolitan Sewerage District began diverting flow around the Yahara Lakes in 1958**.** Based on the large extent of row crop

farming and dairy operations within the Lake Kegonsa Watershed, agricultural areas have the potential to contribute typical agricultural runoff to the watershed. There are some small well-buffered waterways and larger wetland complexes west of Lake Kegonsa that help buffer the localized runoff. There are some cold-water springs in the Lake Kegonsa Watershed west of US 51 that help contribute to base flow and water quality of the western basin of Lake Kegonsa. The water quality data was obtained from the following sources:

a. WDNR Surface Water Data Viewer.
b. WDNR Explore WI Waters.
c. USEPA Surf Your Watershed.
d. United States Geological Survey's (USGS's) National Map.
e. WDNR Land Legacy Report.
f. Yahara CLEAN Strategic Action Plan for Phosphorus Reduction.
g. The State of the Yahara Lakes Report.
h. The Total Maximum Daily Loads (TMDL) for Total Phosphorus and Total Suspended Solids in the Rock River Basin.

F. Is this river or stream on the WDNR's "Impaired Waters" list?

☐ No
☒ Yes–List: The Yahara River is listed as an impaired water for total phosphorus and TSS from Lake Kegonsa to the Rock River.

6. If bridge or box culvert replacement, are migratory bird nests present?

☐ Not Applicable
☒ None identified
☐ Yes–Identify Bird Species present
Estimated number of nests is:

Migratory cliff swallows, barn swallows, eastern phoebes, or potentially other bird species may nest under the US 51 bridge crossing in McFarland and the US 51 bridge crossing in Stoughton. USFWS will permit the destruction of inactive nests of swallows and the eastern phoebe during the non-nesting season. Highway and bridge work may proceed during the nesting season if a depredation permit has been obtained from the USFWS or nesting on the affected site has been successfully prevented.

Inspection of bridges, if required, would occur closer to the time of construction. Mitigation measures followed if migratory bird nests are found on structures within the project corridor would likely include the following:

a. Demolition of existing structure(s), if needed, would occur outside of the species' nesting season.
b. Nests would be removed before the nesting season, or other means would be implemented to prevent nesting such as placement of netting on the existing structure before the nesting season.

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?

☐ Not Applicable
☒ Yes
☐ No–Describe mitigation measures:

A USFWS Depredation Permit will be required to remove migratory bird nests if any demolition of structures takes place during the nesting season and mitigation measures noted in question 6 cannot be accomplished.

8. Describe land adjacent to stream*:*
At the US 51 Yahara River crossing in McFarland, land use adjacent to the stream is park land (Dane County Babcock Park). Upstream of the park is Lake Waubesa. Bordering the river downstream of US 51 are residential properties, wetlands, and isolated woodlands.

At the US 51 Yahara River crossing in downtown Stoughton, land use adjacent to the stream includes commercial properties, residential properties, city parks, industrial properties, and isolated wetlands and woodlands of the Yahara River Corridor.

9. **Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**
No Yahara River dischargers or receivers within 0.5 miles of the project have been identified. From the closest point to US 51 in downtown Stoughton, the Stoughton Wastewater Treatment Plant's discharge to the Yahara River is approximately 0.51 miles south (downstream) of US 51.

10. **Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment:** [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

For the proposed action, the existing US 51 bridge over the Yahara River in McFarland would be replaced. The current bridge inspection indicated that the bridge warrants replacement. The existing bridge has cracking on the roadway surface and deterioration on the abutments. Also, a previous patching job has caused a tripping hazard on the existing sidewalk. When the bridge is reconstructed, it can be increased to accommodate the addition of bicycle and pedestrian facilities, which is a benefit to the area and Babcock Park. As requested by the WDNR, the span of the bridge would also be increased about 25 feet to match the width of the river at the dam. This bridge is at the Babcock Park lock and dam system and is within the 100-year floodplain.

This reach of the Yahara River in McFarland is regularly used by recreational watercraft. Navigation aids will be required for placement around the construction area during construction. WisDOT Standard Specification 107.19 regarding construction over navigable waterways will apply.

At the existing US 51 crossing of the Yahara River in Stoughton, bridge replacement is not planned.

11. **Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**
The project is not at a design stage advanced enough to determine the effects to backwater. This determination will be completed for the proposed action during final design and will be consistent with NR 116 and 23 CFR 650 Subpart A. The final design will result in no additional backwater as crossing structures will be designed to pass the flows within the 100-year floodplain. As requested by WDNR and Dane County, the span of the US 51 bridge over the Yahara River in McFarland would be increased to be at least as wide as the existing dam opening~~, the span of the US 51 bridge over the Yahara River in McFarland would be increased approximately 25 feet to match the width of the river at the dam~~.

12. **Describe and provide the results of coordination with any floodplain zoning authority:**
Mapped floodplains associated with the Yahara River are located in the study area along US 51 in McFarland and Stoughton. No specific floodplain impact coordination has occurred with any floodplain zoning authority. Floodplain maps were checked to determine the location, amount, and type of floodplain encroachment. Coordination with the floodplain zoning authority will be completed for the proposed action during final design. In McFarland, McFarland would have floodplain zoning authority, and in Stoughton, Stoughton would have floodplain zoning authority.

13. **Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**

The proposed action is not at a design stage advanced enough to determine changes in the design flood or backwater impacts. This determination will be completed during final design. However, the proposed action will not result in significant encroachment or any support of incompatible floodplain development.

- ☒ No impacts would occur.
- ☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- ☐ Significant flooding with a potential for property loss and a hazard to life.
- ☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. **Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**
The floodplains of the Yahara River adjacent to US 51 improvements would remain in the same state as before construction. At the existing US 51 crossing of the Yahara River in Stoughton, no effects to existing or planned floodplain use is anticipated. No bridge construction or expansion of the roadway adjacent to the bridge is planned. At the US 51 crossing of the Yahara River in McFarland, the existing bridge is 4 lanes wide and improvements to US 51 would have minimal effect on the floodplains of the Yahara River. Some grading up to the floodplain for bridge reconstruction would be required. The span of the new bridge would be increased to be at least as wide as the existing dam opening. ~~match the lock and dam structure.~~

15. **Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**
Exposed soils during and after construction have the potential for erosion into environmentally sensitive areas such as streams and wetlands. Soil types, existing drainage patterns, terrain, and the extent and duration of highway construction influence the degree to which erosion could occur at a particular location. Use of strict erosion control measures before, during, and after construction would minimize the potential for erosion impacts at waterways, wetlands, and environmental corridors.

    Water quality impacts during construction could impact animals and fish inhabiting or dependent upon the stream. In order to protect developing fish eggs and substrate for aquatic organisms, all instream work that could adversely impact water quality will not be undertaken between March 1 and June 15. WisDOT specifications will address restoration and seed mixes to replace the vegetation removed as part of construction.

16. **Are measures proposed to enhance beneficial effects?**

    ☒ No
    ☐ Yes. Describe:

UPLAND WILDLIFE AND HABITAT EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-5

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None Identified	

1. Proposed Work in Upland Areas:

A. Describe the nature of proposed work in the upland habitat area (e.g., grading, clearing, grubbing, etc.):

Work in upland habitat areas would be limited to clearing, grubbing, excavation, and grading associated with reconstruction of US 51 on the existing alignment and for associated intersection improvements. These activities would be required to create a barrier-free clear zone next to the highway.

2. Vegetation/Habitat:

A. Give a brief description of the upland habitat area. Include prominent plant community(ies) at the project site (list vegetation with a brief description of each community type if more than one present).

The preferred alternative's improvements are on the existing roadway alignment, generally consisting of managed R/W with the exception of areas too wet or steep to maintain. Land types are shown on the mapping in Appendix E.

Upland habitat along the project corridor generally occurs in isolated naturalized areas and other tracts of land that are not in agricultural production. The small upland areas typically have forested or grassland cover (native and introduced) and are scattered throughout the project corridor. Because the preferred alternative is on the existing US 51 alignment, the majority of the impacts to uplands would be to edge habitat of successional woods and fence lines that abut US 51.

Some restored native warm-season upland grassland habitat and private-landowner invasive species management (forested understory clearing) exists west and southwest of the intersection of US 51 and Exchange Street just south of McFarland. The diverse habitat complex at Exchange Street is described in Factor Sheet C-1, Wetlands Evaluation and on the Rapid Assessment Evaluation forms provided in the project wetland delineation report.

East of Stoughton near Spring Road, there is a WDNR Extensive Wildlife Area and adjoining private upland and woodland north of US 51. The lands consist of upland crop fields, pasture, and moderate to mature oak woods on the eastern and southeast side of a WDNR property with an area of upland deciduous woods north of US 51. The area of upland deciduous woods is approximately 60 to 75 acres and is in private ownership. Plant and animal species typical of forested areas of southern Dane County would be expected in this area. Interior portions of this area may support a diversity of species. This is because of the proximity to the WDNR Extensive Wildlife Area and the associated and adjoining habitat types (forested, cropped, and undeveloped lands) of the collective area.

South and southwest of US 51, between Halverson Road and Lake Kegonsa Road, there are larger habitat complexes containing upland and lowland woods amidst extensive wetland habitat. Species include some oaks, elms, cottonwood, box elder, and other transitional species. These habitat complexes are described in Factor Sheet C-1, Wetlands Evaluation and on the Rapid Assessment Evaluation forms provided in the project wetland delineation report.

Lower Mud Lake Fishery Area is an extensive area of WDNR-owned lands that contain a multitude of habitat types and intermingled wetland complexes. No distinct or substantial upland habitat areas of this wildlife complex are anticipated to be disturbed by this project.

B. Will the project result in changes in the vegetative cover of the roadside?

As a result of construction, some forest cover or roadside native species may be replaced by nonnative herbaceous species. WisDOT would revegetate any disturbed areas after construction. Native species may be considered. The project would result in changes to roadside vegetation, but these changes are dynamic and the roadside vegetation may return to a preconstruction composition over time.

3. Wildlife:

A. Identify and describe any observed or expected wildlife associations with the plant community(ies) listed in question #1:

Based on field reviews of the project corridor, WDNR and WisDOT's consultant observed habitat areas suitable for whitetail deer, several smaller fur-bearing mammals, waterfowl, and several upland bird species. More detailed study would be necessary at locations with high quality or potential rare habitat supporting threatened or endangered species to further define the wildlife located in the vicinity of each alternative.

WDNR completed a review of the NHI and other WDNR records for the project area and indicated the following state-listed endangered resources have been known to occur in the project area or its vicinity and could be impacted by the proposed action: wild hyacinth, pale purple coneflower, yellow giant hyssop, and Blanding's turtle. Resource surveys were completed by WisDOT in 2016 for the three NHI plant species. Only wild hyacinth was identified during the review but at a location outside the footprint of the proposed project. The yellow giant hyssop and pale purple coneflower were not identified and the WDNR indicated there are no further requirements for these species.

WisDOT also completed an invasive species survey in 2016. No Wisconsin Administrative Code Chapter NR 40 prohibited species were identified. No populations of invasive species were identified for immediate treatment. The WDNR plans to work with WisDOT to help identify any problem areas on the project and will recommend preventative measures.

B. Identify and describe any known wildlife or bird use areas or movement corridors that will be severed or affected by the proposed action:

Disturbed WisDOT R/W will be restored in kind or as needed. The preferred alternative would not sever known wildlife or bird use areas or movement corridors. Some impacts would occur at the following areas.

<u>Lake Kegonsa Road and US 51</u>
At the intersection of Lake Kegonsa Road and US 51 (shown in Appendix E sheet 11), the proposed highway and intersection reconstruction with turn bays results in approximately 0.9 acres of R/W acquisition from the wetlands and brush/wooded landscape near the southeast and northeast quadrants of this intersection. While existing US 51 already has severed the woodland and wetland at this location, reconstruction of US 51 and the Lake Kegonsa Road intersection would result in additional impacts to the larger wetland and woodland remnant located south of US 51. This area likely provides various habitat needs for several plant and animal species and serves as a drainageway from a surrounding wetland complex.

<u>Northwest of Dyreson Road</u>
US 51 currently severs a wooded ridge area 3000 feet north and northwest of Dyreson Road (shown in Appendix E sheet 13). The proposed reconstruction of US 51 would require approximately 1 acre of R/W acquisition at this wooded area. While existing US 51 already has severed the woodland at this location, reconstruction of the US 51 will result in a slightly more substantial severance and impact to the woodland remnant. The acquisition may impact habitat on both the west and east sides of US 51 at this isolated woodland, located within the Kramper conservation easement. This existing bisected ridge of approximately 16 acres of upland woods contains a mix of uplands and a wet-mesic wooded drainage. The wooded area along the west side of US 51 contains an intermittent waterway. A diversity of species

may use this area for food, shelter, and water and the area likely provides habitat for several plant and animal species. Effective erosion control and wooded drainageway management can minimize direct and indirect impacts to habitat in the area. The highway reconstruction project would not sever a previously whole habitat area.

Lower Mud Lake/Keenans Creek Wetland Complex
The preferred alternative includes reconstruction of the existing 2-lane highway on the existing US 51 alignment through the Lower Mud Lake/Keenans Creek Wetland Complex just south of Mahoney Road. Existing US 51 severs the wetland complex and the preferred alternative would not make wildlife crossing more difficult. As requested by the WDNR, WisDOT would bridge Keenans Creek and replace and resize the remaining culverts while also evaluating the installation of fencing to direct animals crossing US 51 to the area under the new bridge. These measures would help provide safe crossings for wildlife and improve the hydraulic connection between the two portions of the severed wetland.

Exchange Street
West and south of the proposed roundabout at Exchange Street and US 51 (shown in Appendix E sheet 14), the new East Tower Road roadway requires approximately 7 acres of R/W consisting of wetland, transitional forested edges/woodlands and native grass upland fields. This acquisition impacts areas of native warm-season grass upland fields, woods, and wooded fence lines between the new East Tower Road roadway and US 51. Impacts in this area may be less severe since the existing US 51 alignment is only about 300 feet east of the local access road to be established. There is the potential for increased roadway mortality with the general loss of habitat. The upland and wetland habitat areas west of Exchange Street are extensive and the area likely harbors a large variety of small and large wildlife. With the disturbance at Exchange Street, some wildlife habitat will be lost or compromised. This area likely provides various habitat needs for both upland and wetland nesting species of birds, reptiles, amphibians, and small and large animals in the surrounding wetland complex.

C. Discuss other direct impacts on wildlife and estimate significance:

The improved facilities are not anticipated to result in substantially higher travel speeds or substantially higher traffic volumes. Therefore, no increase or a minimal increase in traffic noise would be anticipated and the preferred alternative should not deter wildlife from inhabiting the adjacent habitat areas. Higher mortality rates for animals crossing the roadway would not be expected. The wider clear zones associated with the reconstructed facility and intersections as well as the additional safe wildlife crossings, such as bridging of Keenans Creek and new or larger culverts, could reduce wildlife mortality.

D. Identify and discuss any probable indirect impacts on wildlife in the area expected due to the project:

The preferred alternative would not be expected to result in indirect impacts on wildlife.

E. Describe measures to avoid and/or minimize adverse effects or to enhance beneficial effects:

Avoidance of adverse effects will be pursued through horizontal and vertical alignment adjustments and other design modifications such as narrowing of the roadway section or bridging sensitive areas. Measures that will be considered to minimize adverse effects or to enhance beneficial effects might include steepening of slopes to reduce impacts from clearing and grading, planting of native species, use of silt fence during construction to protect turtles and snakes. Additional efforts may include moving bird nests, construction of culverts for wildlife crossing and hydraulic connection, or construction of permanent passageways for small wildlife such as turtles and snakes.

THREATENED AND ENDANGERED SPECIES EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-7

Alternative Proposed Action- Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7
Preferred ☒ Yes ☐ No ☐ None identified	

Federal Resources

1. Complete the following table using the Official Species List from U.S. Fish and Wildlife Service (FWS):

Species Common Name	Species Scientific Name	Federal Status	Effect Determination	Justification/Explanation
Eastern Prairie Fringed Orchid	*Platanthera leucophaea*	Threatened	No Effect	This is a nonessential experimental population. A review of WDNR's NHI database did not identify previous occurrences or suitable habitat for this species.
Mead's Milkweed	*Asclepias meadii*	Threatened	No Effect	Impacts to suitable habitat would not occur as part of this project. A review of WDNR's NHI database did not identify previous occurrences or suitable habitat for this species.
Prairie Bush-Clover	*Lespedeza leptostachya*	Threatened	No Effect	Impacts to suitable habitat would not occur as part of this project. A review of WDNR's NHI database did not identify previous occurrences or suitable habitat for this species.
RPBB	*Bombus affinis*	Endangered	May Affect, Not Likely to Adversely Affect	Areas of unlikely habitat or degraded habitat are located throughout the high potential zone (HPZ), including paved and mowed urban areas in McFarland and farmed and mowed rural areas. In addition, the highway side slopes along rural US 51 are mowed as part of Dane County's mowing cycle for WisDOT's highways. Impacts to RPBB habitat is minimized because the majority of the project impacts within the HPZ are along the existing highway corridor and within or adjacent to areas that are mowed or farmed. See the concurrence letter from USFWS dated January 30, 2020.
NLEB	*Myotis septentroinalis*	Threatened	May Affect, Not Likely to Adversely Affect	See the concurrence letters from USFWS dated June 26, 2019 and January 30, 2020.
Whooping Crane	*Grus americana*	Experimental Population, Nonessential	No Effect	Impacts to suitable habitat would not occur as part of this project. A review of WDNR's NHI database did not identify previous occurrences or suitable habitat for this species.

Date of Official Species List: October 10, 2019, updated October 19, 2020 (no changes to listed species).

Document all species identified on Official Species List, including proposed species.

2. Is there designated or proposed critical habitat in the vicinity of the project?

☒ No
☐ Yes–Describe critical habitat, proximity to project, and potential impacts to the critical habitat:

3. Has Section 7 consultation with FWS been completed?

☐ No
☒ Yes–Describe consultation efforts and conclusions:

An updated USFWS Official Species list was generated October 10, 2019 using the IPaC website. The list identified six species that have been known to occur in Dane County. Based on discussions with WDNR and knowledge of habitat along the project corridor that would be affected by the proposed action, it was concluded that suitable habitat for four of the six species are not likely to occur along the corridor (eastern prairie fringed orchid, Mead's milkweed, prairie bush-clover, and whooping crane). A No Effect determination was made for these four species.

For the NLEB, concurrence with the February 5, 2018 Programmatic Biological Opinion for Transportation Projects was obtained. A May Affect, Not Likely to Adversely Affect determination was reached through the application of AMMs. The concurrence letters are dated June 26, 2019 and January 30, 2020, satisfying requirements under Section 7 of the Endangered Species Act for NLEB.

For the RPBB, a May Affect, Not Likely to Adversely Affect determination was provided by USFWS. USFWS concluded the project's impacts to the RPBB would be insignificant or discountable. The concurrence letter is dated January 30, 2020, satisfying requirements under Section 7 of the Endangered Species Act for RPBB.

Section 7 consultation is provided in Appendix L.

4. Are avoidance, minimization or compensatory mitigation measures required?

☐ No
☒ Yes–Describe. Include commitments on Basic Sheet 9, Environmental Commitments:
The following AMMs have been agreed to for the project under the programmatic informal consultation with USFWS for a May Affect, Not Likely to Adversely Affect Determination for the NLEB.

- General AMM 1–Personnel working in areas of known or presumed bat habitat will be made aware of environmental commitments, including applicable Avoidance and Minimization Measures.
- Lighting AMM 1–Lighting will be directed away from suitable habitat between April 1 and September 30, the active season.
- Tree Removal AMM 1–Tree removal will be limited to what is required to implement the project safely.
- Tree Removal AMM 2–Tree clearing will be completed between October 1 and March 31, the inactive season.
- Tree Removal AMM 3–Tree removal will be limited to that specified in project plans. Bright orange flagging and fencing will be installed before any tree clearing to ensure contractors stay within clearing limits.
- Tree Removal AMM 4–Known roost sites, trees within 0.25 miles of roosts, and documented foraging habitat will be avoided by the project.

State Resources

1. Are threatened or endangered species known to occur in the vicinity of the project?

☐ None identified
☒ Yes–Complete the following table and include the date of the most recent Natural Heritage Inventory (NHI) review by WDNR:

The WDNR completed a review of the NHI and other WDNR records for the project area and documented their findings in the September 4, 2019 Initial Project Review Letter. A copy of the letter is provided in Appendix H. The WDNR indicated the following state-listed threatened and endangered species have been known to occur in the project area or its vicinity and could be impacted by the proposed action.

Species Common Name	Species Scientific Name	State Status	Effect Determination	Justification/ Explanation
Wild Hyacinth	*Camassia scilloides*	Endangered	No Effect	A biological survey was completed and wild hyacinth was identified. The identified locations included remnant prairie areas near the project corridor, but WDNR determined the population areas are outside of the footprint of the proposed project.
Pale Purple Coneflower	*Echinacea pallida*	Threatened	No Effect	The biological survey completed identified no populations.
Yellow Giant Hyssop	*Agastache nepetoides*	Special Concern	No Effect	The biological survey completed identified no populations.
Blanding's Turtle	*Emydoidea blandingii*	Special Concern	Potentially	Blanding's turtles are found in a variety aquatic habitats and they move between a variety of wetland types. Exclusion fencing will be used during construction and any turtles encountered will be moved to suitable habitat outside the footprint of the project.

Date of NHI database review: August 26, 2019

2. Has threatened and endangered resource coordination with WDNR been completed?

☐ No–Explain:
☒ Yes–Attach and reference location in this document:

As summarized in the WDNR Initial Coordination letter dated September 4, 2019, WisDOT contracted a consultant to conduct a review of the corridor for three NHI plant species in 2016: yellow giant hyssop, wild hyacinth, and pale purple coneflower. The survey reviewed potential habitats along the corridor for each of these species during the 2016 field season.

Only wild hyacinth was identified during the review and it was identified in the same locations as the NHI element observance. The identified locations included remnant prairie areas near the project corridor, but WDNR determined the population areas are outside of the footprint of the proposed project. As requested by WDNR, WisDOT will take measures to avoid the populations of this endangered plant species and equipment and materials will not be staged in these areas and the areas will not be otherwise disturbed during construction. WisDOT will notify WDNR whether it is determined that the population areas could be impacted.

The yellow giant hyssop and pale purple coneflower were not identified during the 2016 plant survey and the WDNR indicated there are no further requirements for this species.

3. Are avoidance, minimization or compensatory mitigation measures required?

☐ No
☒ Yes–Describe. Describe. Include commitments on Basic Sheet 9, Environmental Commitments:

As requested by WDNR, WisDOT will take measures to avoid the populations of wild hyacinth, an endangered plant species. Equipment and materials will not be staged in these areas and the areas will not be otherwise disturbed during construction. WisDOT will notify WDNR if it is determined that the population areas could be impacted.

Wildlife barrier fencing near areas of open water or wetlands at the Lower Mud Lake Fishery Area, to prevent turtles from crossing US 51 travel lanes, will be constructed as requested by WDNR. The fencing will be evaluated during final design and discussed with WDNR. Any turtles encountered during construction will be moved to suitable habitat outside the footprint of the project.

Other Protected Resources

Bald and Golden Eagles

1. Are bald and/or golden eagles known to occur near the project?

☒ None identified
☐ Yes–Describe:

2. Will here be adverse or beneficial effects on bald and/or golden eagles as a result of the project?

☒ No, explain:
☐ Yes, describe general proximity to project and potential impacts:

3. Has bald and golden eagle-related coordination with WDNR and/or FWS been completed?

☐ No, explain:
☒ Yes, attach and reference location in this document: WDNR Initial Coordination letter dated September 4, 2019 in Appendix H.

4. Are avoidance, minimization or compensatory mitigation measures required?

☒ No
☐ Yes, describe. Include commitments on Basic Sheet 9, Environmental Commitments:

Migratory Birds

1. Are migratory birds known to occur in the vicinity of the project?

☐ None identified
☒ Yes–Describe:

The WDNR Initial Coordination letter dated September 4, 2019 indicates there is evidence of past migratory bird nesting on existing structures over the Yahara River and that it is likely that birds are using other structures along the US 51 corridor. The WDNR letter recommends that the project include a review of structures to determine whether there is use by nesting birds.

2. Will there be adverse or beneficial effects on migratory birds because of the project?

☒ No, explain:
☐ Yes, describe general proximity to project and potential impacts:

3. Has migratory bird-related coordination with WDNR and/or FWS been completed?

☐ No, explain:
☒ Yes, attach and reference location in this document:

Refer to the WDNR Initial Coordination letter dated September 4, 2019 in Appendix H.

4. Are avoidance, minimization or compensatory mitigation measures required?

☐ No
☒ Yes, describe. Include commitments on Basic Sheet 9, Environmental Commitments:

As recommended in the WDNR Initial Coordination letter dated September 4, 2019, the project will either occur only between August 30 to May 1 (non-nesting season) or will use measures to prevent nesting (e.g., remove unoccupied nests during the non-nesting season and install barrier netting before May 1).

Factor Sheet D-1

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Ozone:

A. Is the project located in an area which is designated nonattainment or maintenance for ozone?
- ☒ No, proceed to question 2
- ☐ Yes, proceed to question 1B

B. Is this project exempt from a conformity determination per 40 CFR 93.126 or per 40 CFR 93.128 as a traffic signal synchronization project or is the project exempt from regional emissions analysis requirements per 40 CFR 93.127?
- ☐ No, proceed to question 1C
- ☐ Yes, explain which exemption applies and proceed to question 2:

C. This project is a non-exempt project. One of the following boxes must be checked:

☐ This project is included in a Metropolitan Planning Organization (MPO) Board-approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region's MPO. The RTP and TIP were found to conform to the State Implementation Plan (SIP) for ozone by the Federal Highway Administration and the Federal Transit Administration. There has been no significant change in the design concept or scope from the project description in the RTP and TIP. Provide the following information:

MPO Name:
RTP Name:
TIP Name:
TIP Number:
TIP Project Description:
Conformity Finding Date(s):

☐ Through the interagency consultation process for air quality, this project has been determined to be Not Regionally Significant and is not included in the conforming RTP and TIP. Documentation supporting this conclusion is attached as

☐ This project is located outside of a Metropolitan Planning Organization's boundaries and has received a positive conformity determination per the rural conformity section of the 2012 Interagency Memorandum of Agreement Regarding Determination of Conformity of Transportation Plans, Programs and Projects to State Implementation Plans.
Conformity Finding Date:

☐ Other, describe:

2. Fine Particulate Matter, less than 2.5 microns or less ($PM_{2.5}$)

A. Is the project located in an area which is designated nonattainment or maintenance for $PM_{2.5}$?
- ☒ No, proceed to question 3
- ☐ Yes, proceed to question 2B

B. Is this project exempt from a conformity determination per 40 CFR 93.126 or per 40 CFR 93.128 as a traffic signal synchronization project or is the project exempt from regional emissions analysis requirements per 40 CFR 93.127?
- ☐ No, proceed to question 2C or 2D.
- ☐ Yes, explain which exemption applies and proceed to question 3:

C. This project is a non-exempt project but does not fall under the category of projects listed under 40CFR93.123(b)(1). Through the interagency consultation process for air quality, this project is not considered a project of local air quality concern. If the following box can be checked, proceed to Question 3. If the following box cannot be checked, continue to Question 2D.

☐ This project is included in a Metropolitan Planning Organization (MPO) Board-approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region's MPO. The RTP and TIP were found to conform to the State Implementation Plan (SIP) for $PM_{2.5}$ by the Federal Highway Administration and the Federal Transit Administration. There has been no significant change in the design concept or scope from the project description in the RTP and TIP. The conformity determinations of the Plan and TIP were based on the latest planning assumptions, using EPA's most recent emissions estimation model. No hot-spot analysis is required.
Provide the following information:
MPO Name:

RTP Name:
TIP Name:
TIP Number:
TIP Project Description:
Conformity Finding Date(s):

D. This project is a non-exempt project and it falls under the category of projects listed under 40 CFR 93.123(b)(1). Through the interagency consultation process for air quality, this project is considered a project of local air quality concern. If the following box can be checked, proceed to Question 3. If the following cannot be checked, continue to Question 2E.

☐ This project is included in a Metropolitan Planning Organization (MPO) Board-approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region's MPO. The RTP and TIP were found to conform to the State Implementation Plan (SIP) for $PM_{2.5}$ by the Federal Highway Administration and the Federal Transit Administration. There has been no significant change in the design concept or scope from the project description in the RTP and TIP. The conformity determinations of the Plan and TIP were based on the latest planning assumptions, using EPA's most recent emissions estimation model. Through the interagency consultation process for air quality, this project is considered a project of local air quality concern per 40 CFR 93.123(b)(1). A quantitative hot-spot analysis was performed and a determination was made, through the interagency consultation process, that implementation of the project will not cause or contribute to any new localized PM violation, increase the frequency or severity of any existing violations, or delay timely attainment of the NAAQS or any required interim emission reductions or other milestone in the PM nonattainment or maintenance area. Documentation supporting this conclusion is attached as .

Provide the following information:

MPO Name:
RTP Name:
TIP Name:
TIP Number:
TIP Project Description:
Conformity Finding Date(s):

E. This project is a new non-exempt project that is of local air quality concern but is not included in a metropolitan plan or TIP. The following box must be checked:

☐ This project was not initially included in a conforming metropolitan plan and TIP. Through the interagency consultation process for air quality, this project is considered a project of local air quality concern per 40 CFR 93.123(b)(1). The plan and TIP have been amended to include the project. A quantitative hot-spot analysis was performed and a determination was made, through the interagency consultation process, that implementation of the project will not cause or contribute to any new localized PM violation, increase the frequency or severity of any existing violations, or delay timely attainment of the NAAQS or any required interim emission reductions or other milestone in the PM nonattainment or maintenance area. Documentation supporting this conclusion is attached as . Provide the following information:

MPO Name:
RTP Name:
TIP Name:
TIP Number:
TIP Project Description:
Conformity Finding Date(s):

F. Are mitigation measures for $PM_{2.5}$ proposed?

☐ No, explain why:
☐ Yes, discuss mitigation options considered and identify those measures proposed for implementation:

3. Mobile Source Air Toxics (MSATs):

A. For this project, what level of analysis is required for MSATs?

☐ No analysis is required. The project has no meaningful potential MSAT effects or is an exempt project. One of the following boxes must be checked.

☐ The project qualifies as a categorical exclusion action under 23 CFR 771.117
☐ The project is exempt under 40 CFR 93.126
☐ This document is an environmental assessment, but the project will have no meaningful impact on traffic volume or vehicle mix. Documentation supporting this conclusion is here:

☒ A qualitative analysis is required. The project has low potential for MSAT effects. One of the following boxes must be checked. The qualitative analysis is attached here: See below for a qualitative analysis for Alternative H.

☐ The project is a minor widening project

- ☐ The project is a new interchange connecting an existing roadway with a new roadway
- ☐ The project is a new interchange connecting new roadways
- ☐ The project makes minor improvements or expansions to intermodal centers or other projects that affect truck traffic
- ☒ The project improves highway, transit or freight operations without adding substantial capacity

☐ A quantitative analysis is required. The project has a higher potential for MSAT effects. One of the following two boxes must be checked and the third box must also be checked. The quantitative analysis is attached here:

- ☐ The project will create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location, involving a significant number of diesel vehicles for new projects or accommodating with a significant increase in the number of diesel vehicles for expansion projects
- ☐ The project will create new capacity or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year and
- ☐ The project is proposed to be in proximity to populated areas.

B. Are mitigation measures for MSATs proposed?

☒ No, explain why: When US 51 is improved, the localized level of MSAT emissions for Alternative H could be higher relative to the No-Build Alternative, but this could be offset due to reductions in congestion (which are associated with lower MSAT emissions). On a regional basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause regionwide MSAT levels to be significantly lower than today.

☐ Yes, discuss mitigation options considered and identify those measures proposed for implementation:

For Alternative H, the amount of MSATs emitted would be proportional to the amount of truck vehicle miles traveled (VMT). The truck VMT estimated for Alternative H are higher than that for the No Build Alternative, because of the additional activity associated with the expanded intermodal center. This increase in truck VMT associated with Alternative H would lead to higher MSAT emissions (particularly diesel particulate matter) in the vicinity of the intermodal center. The higher emissions could be offset somewhat by two factors:

1) The decrease in regional truck traffic because of increased use of rail for inbound and outbound freight.
2) Increased speeds on area highways because of the decrease in truck traffic. The extent to which these emissions decreases will offset intermodal center-related emissions increases is not known.

Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the USEPA’s national control programs that are projected to reduce annual MSAT emissions by over 90 percent from 2010 to 2050 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, FHWA, October 12, 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the USEPA-projected reductions are so significant (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future as well.

The additional freight activity contemplated as part of the project alternatives will have the effect of increasing diesel emissions in the vicinity of nearby homes, schools, and businesses; therefore, under Alternative H there may be localized areas where ambient concentrations of MSAT would be higher than under the No Build Alternative. However, as discussed previously, the magnitude and the duration of these potential differences cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific health impacts. Even though there may be differences, on a regionwide basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that in almost all cases the MSAT levels in the future will be significantly lower than today.

In summary, Alternative H in the design year could be associated with higher levels of MSAT emissions in the study area, relative to the No Build Alternative, along with some benefit from improvements in speeds and reductions in regionwide truck traffic. Under all alternatives, MSAT levels are likely to decrease over time due to nationally mandated cleaner vehicles and fuels.

CONSTRUCTION STAGE SOUND QUALITY EVALUATION

Wisconsin Department of Transportation

Factor Sheet D-2

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. **Identify and describe residences, schools, libraries, or other noise sensitive areas near the proposed action and which will be in use during construction of the proposed action. Include the number of persons potentially affected:**
   The proposed action would improve US 51 from I-39/90 to Terminal Drive/Voges Road. There were 286 receptors modeled that included a library, commercial buildings, and residences in urban and rural areas of the corridor. Residences make up 131 of the modeled receptors. Some of these modeled receptors represent numerous residential properties. In downtown Stoughton noise sensitive areas include a youth center, the City Hall and Opera House, the Post Office, a library, a senior center, a Norwegian Heritage Center, and two churches. Outside the downtown area there is also a health services building (hospital/clinic) near WIS 138 (west). In the rural section between County B (east) and Exchange Street there is another church and in McFarland there is a retirement community and Babcock Park.

2. **Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels:**
   The noise generated by construction equipment would vary greatly, depending on equipment type, model, and make, duration of operation, and specific type of work effort. However, typical noise levels may occur in the 67 to 107 decibels (dBA) range at a distance of 50 feet.

   Figure D-2.1 shows typical noise levels for a variety of construction equipment. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

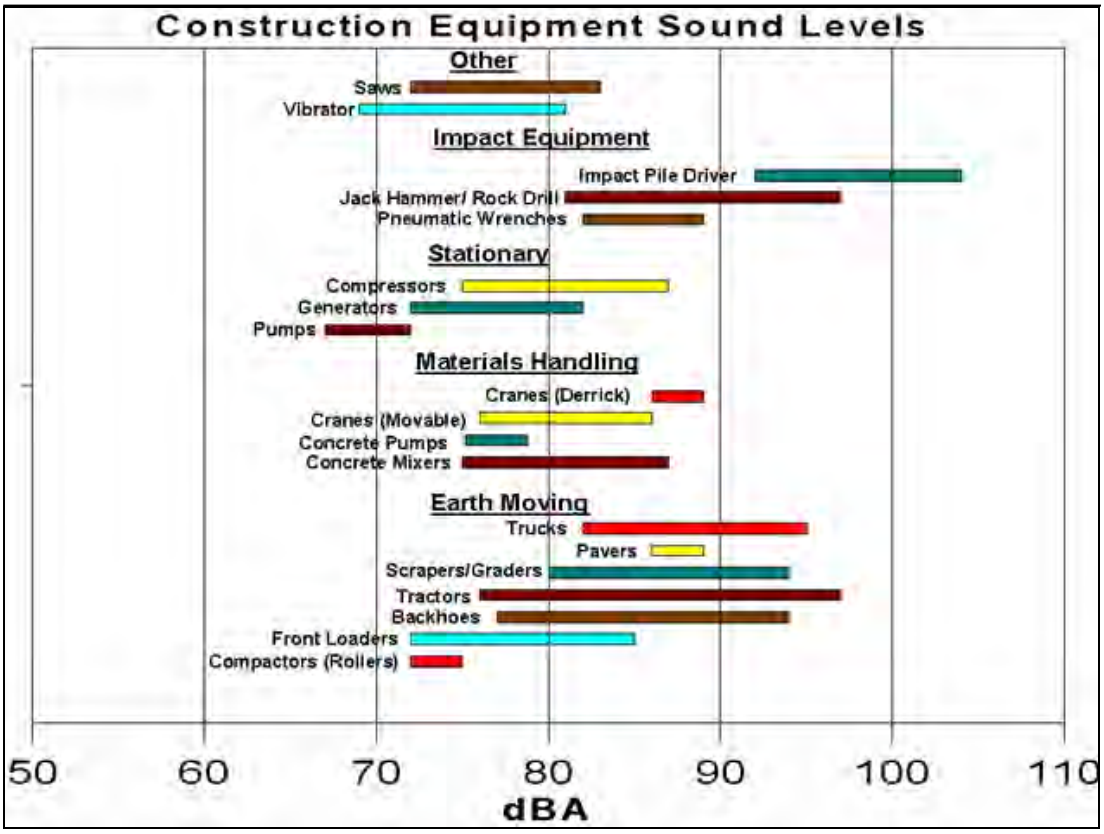


Figure D-2.1 Construction Equipment Sound Levels

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects. Check all that apply:

☒ WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
☐ WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to _____ P.M. until _____A.M.
☐ Special construction stage noise abatement measures will be required. Describe:

TRAFFIC NOISE EVALUATION

Wisconsin Department of Transportation

Factor Sheet D-3

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Need for Noise Analysis:
Is the proposed action considered a Type I project or WisDOT Retrofit Project per FDM 23-10-1?

☐ No–Complete only Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation.
☒ Yes–Complete Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation, and the rest of this sheet.

2. Traffic Data:
Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on Basic Sheet 6, Traffic Summary Matrix*:*

☒ No
☐ Yes–Indicate volumes and explain why they were used:

The following traffic information was used for the noise analysis:

The mainline US 51 traffic volumes used for the noise analysis were developed based on AADT volumes, K30 factor (11.3 percent), and Directional Split factor (59 percent) provided by the WisDOT Traffic Forecasting Section on February 26, 2015. The Dane County Travel Demand Model was used to complete the forecast and the TAFIS output was used as a comparison tool to check against the model output.

The side road volumes included in the noise analysis are based on intersection traffic forecasts provided by the WisDOT Traffic Forecasting Section in April and May 2015.

The truck percentage data used for the noise analysis is based on intersection movement traffic counts performed along the US 51 study corridor in October 2014. The counts collected for the US 51 Corridor Study did not provide truck percentage data along I-39/90 because the interstate mainline is outside of the project limits. Truck data along I-39/90 was obtained from the Beltline PEL study (WisDOT ID 5304-02-01) for the purposes of the US 51 noise analysis.

3. Sound Level Analysis Technique
Identify and describe the noise analysis technique or program used to identify existing and future sound levels: (See attached receptor location map as Appendix O). A receptor location map must be included with this document.

The Traffic Noise Model (TNM) 2.5 computer model was used to identify existing and future noise levels. The TNM 2.5 program uses traffic volume and topographic data to estimate the highest noise levels along the corridor. The noise model was field validated at representative locations. Outdoor readings occurred on July 30 through August 4, 2008 and on June 9, 2015.

Table D-3.1 shows 13 field receptor noise levels obtained during the outdoor readings compared to the existing conditions 2014 noise model.

Table D-3.1 Field Validated Receptors

Receptor Number	Field Reading (Average)	2014 Noise Model Reading	Difference	Receptor Number	Field Reading (Average)	2014 Noise Model Reading	Difference
5	63	65	+2	204	70	68	-2
80	66	65	-1	209	61	62	+1
93	67	64	-3	228	58	61	+3
140	60	60	0	245	69	71	+2
160	57	60	+3	249	64	66	+2
184	73	71	-2	273	61	61	0
203	70	67	-3				

According to the FHWA Noise Analysis and Abatement Guidance, “The model is validated if existing highway traffic noise levels and predicted highway traffic noise levels for the existing condition are within +/- 3 dB(A).”[1] According to the FHWA Noise Analysis and Abatement Guidance, a sound level change of 3 dB(A) is a barely perceptible change.

Criteria used to define traffic noise impacts have been established by WisDOT. Traffic noise impacts occur when the predicted equivalent sound level (Leq) approaches or exceeds the NLC established for a type of land use or when predicted sound levels substantially increase above existing levels. Frequency weighting is used to account for changes in sensitivity of the human ear as a function of frequency. It reflects how noise is “heard.” A-weighting reflects the ear's response to sounds of lower pressure level, and A-weighting is the most widely used system for assessing transportation-related noise. A-weighted decibels are abbreviated dBA. For land uses that include residences, parks, and recreation areas, the NLC is 67 dBA. For commercial land uses, the NLC is 72 dBA. WisDOT has determined the predicted equivalent sound level “approach” is defined as 1 dBA less than the NLC and the “substantial increase” is defined as an increase greater than or equal to 15 dBA compared to existing levels.

Figure D-3.1 shows noise levels for common outdoor and indoor noise levels.

[1] US Department of Transportation, Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance, December 2011, http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance, page 31, Accessed June 8, 2015.

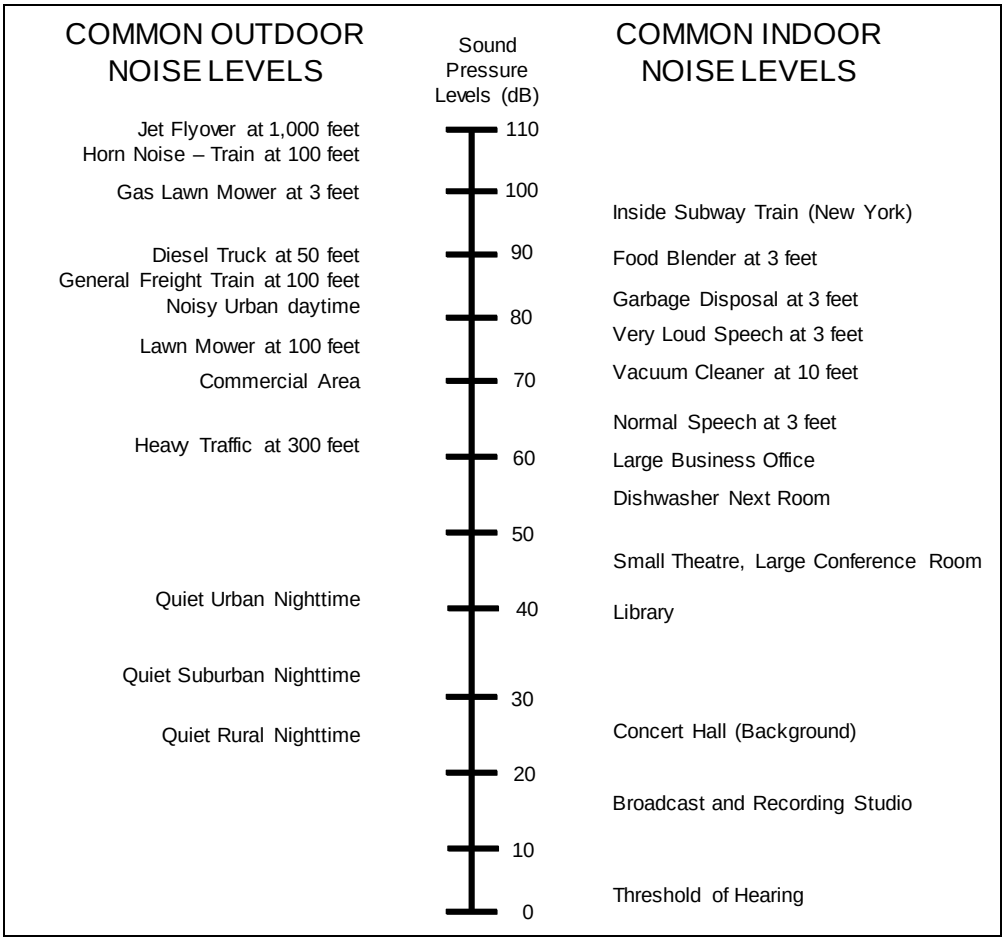


Figure D-3.1 Common Outdoor and Indoor Noise Levels

4. Sensitive Receptors

Identify sensitive receptors (e.g., schools, libraries, hospitals, residences) potentially affected by traffic sound: (See noise receptor location map–Appendix O).

The proposed action would improve US 51 from I-39/90 to Terminal Drive/Voges Road. There were 286 receptors modeled that included a library, commercial buildings, and residences in urban and rural areas of the corridor. Residences make up 131 of the modeled receptors. Some of these modeled receptors represent numerous residential properties. In downtown Stoughton noise sensitive areas include a youth center, the City Hall and Opera House, the post office, a library, a senior center, a Norwegian heritage center, and two churches. Outside the downtown area there is also a health services building (hospital/clinic) near WIS 138 (west). In the rural section between County B (east) and Exchange Street there is another church and in McFarland there is a retirement community and Babcock Park.

Section 4(f) Park Land

Additional receptor locations were reviewed at Babcock Park in McFarland to determine whether a noise impact would occur.

Babcock Park

Babcock Park is located along US 51 in McFarland. There were 26 receptors modeled in Babcock Park in the campground area, one at each of the 25 campsites and one at the host campsite. One receptor was placed in the center of each campsite's concrete parking pad. The noise levels developed with TNM 2.5 for Alternative H (proposed action) indicated that none of the 26 receptors would have a substantial increase in noise levels and none would be exposed to noise levels that approach or exceed the respective NLC. See Table D-3.3 for information on the future decibel levels with the proposed action. See Appendix O for the noise receptor maps.

5. Noise Impacts

If this proposal is implemented will future sound levels produce a noise impact?

☐ No
☒ Yes–The impact will occur because:

☒ The Noise Abatement Criteria (NAC) is approached (1 dBA less than the NAC) or exceeded.
☐ Existing sound levels will increase by 15 dBA or more.

6. Abatement

Will traffic noise abatement measures be implemented?

☐ Not applicable–Traffic noise impacts will not occur.
☒ No–Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes. **A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THE FINAL ENVIRONMENTAL DOCUMENT.**
☐ Yes–Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures which are proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented:

Specific noise abatement measures for the proposed action are not reasonable or feasible. There are four common mitigation measures stated in WisDOT's FDM.

1. Traffic control measures can sometimes be employed to prohibit certain vehicles during noise sensitive times of the day. US 51 is used by trucks and other large vehicles to travel to their destinations. Prohibition of certain vehicles on US 51 is not reasonable and feasible because the majority of the US 51 corridor is classified as a principal arterial and the corridor is an alternate route for the interstate.

2. The use of buffer zones or shifting the horizontal or vertical alignment of the roadway to provide noise mitigation are other measures to consider. Homes, businesses, and farms line most of the US 51 corridor. Because of this, shifting alignments or providing a buffer between the roadway and noise receptors is not feasible because it results in greater impacts compared to staying on the existing roadway alignment. Typically, providing a buffer zone or shifting alignments requires the acquisition of additional R/W and results in additional relocations. The current alignments seek to minimize impacts, including R/W acquisition and relocations.

3. Construction of noise barriers is a third mitigation measure to be considered with Type I projects with noise impacts. A noise barrier can be constructed in the form of earth berms, walls, or a combination. For this project, noise walls were used for the analysis since they require less R/W and space to construct.

   To determine whether a noise wall is feasible, factors including safety, wall height, topography, drainage, utilities, and maintenance are considered. A noise wall also needs to have a minimum of one impacted receptor or common use area that would achieve a 5-dBA noise reduction. Figure D-3.2 shows the general noise wall effectiveness based on the distance from the roadway. The closer a receptor is to the roadway the more noise reduction is achieved. The project corridor is generally rural in nature and receptors are located far apart. At locations where receptors are near to each other, access to the receptor properties would require numerous breaks in a noise wall, rendering it ineffective.

   To determine whether a noise wall is reasonable, a cost-benefit analysis is completed. The FDM limits noise walls to areas where, after following the prescribed analysis from the FDM, a noise wall cost is less than $47,000 per benefited receptor. Additionally, any abatement has to provide at least an 8-dBA reduction to each receptor and a 9-dBA reduction at one receptor.

   A noise wall feasibility and reasonableness analysis was completed. The results of the noise wall analysis for each impacted receptor are summarized in Table D-3.2. See Appendix O for the location of the impacted receptors listed in Table D-3.2 and the noise walls that were modeled. Following the table, the wall calculation referenced is discussed.

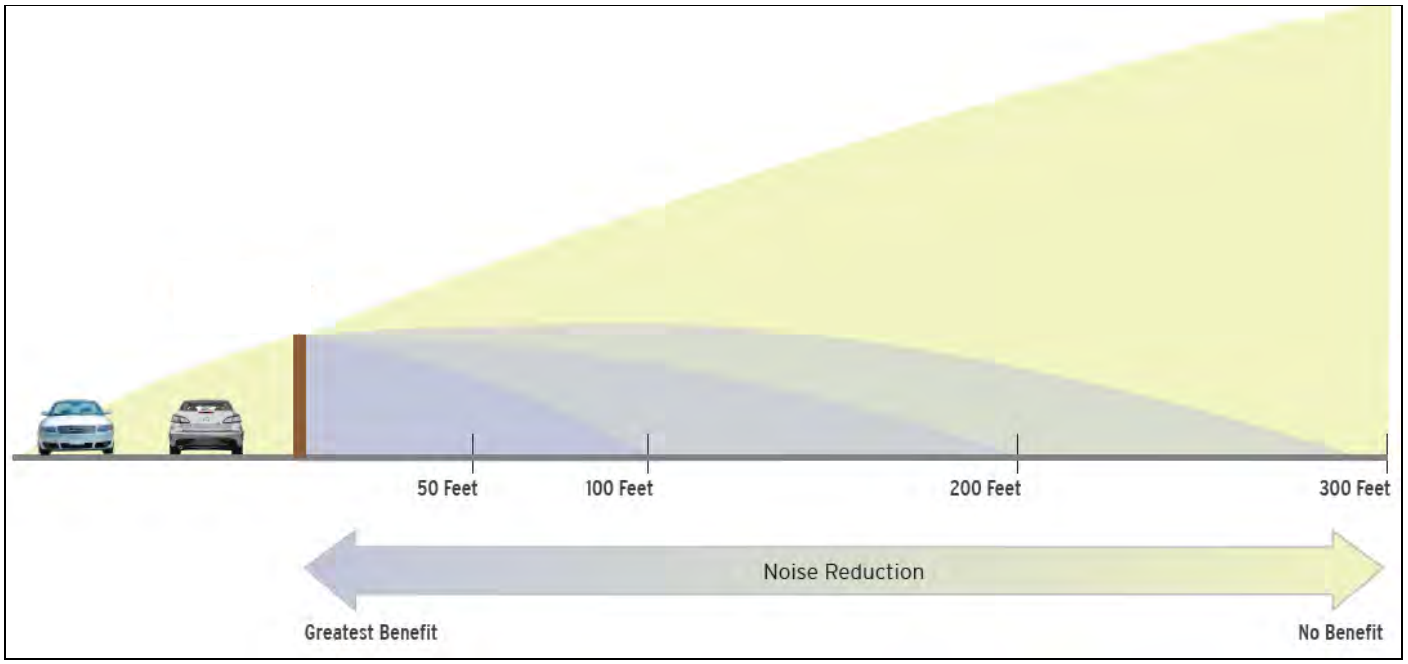


Figure D-3.2 Noise Wall Effectiveness

Table D-3.2 Noise Wall Feasibility and Reasonableness Analysis

Impacted Receptor ID No.	Wall Feasible?	Reason	Wall Reasonable?	Wall Calculation
6	NO	The Receptor is located on a 7-foot hill and any wall at the roadway would need to be at least 7 feet tall to match the existing ground elevation. To provide a wall that would generate a noise reduction, the wall height will be unfeasible.	---	---
10	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
12				
16				
24				
25				
52	YES	---	NO	See Wall Calculation #1
53	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
55	YES	---	NO	See Wall Calculation #1
77	NO	These homes are in a historic district, and it would be an adverse effect to the district to build a noise wall.	---	---
80				
86	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
87	NO	The topography in this area would not support a noise wall.	---	---
92				
96	NO	These homes are in a historic district and it would be an adverse effect to the district to build a noise wall.	---	---
97				
104	NO	This building is constructed to the sidewalk and there is no room to place a noise wall.	---	---
106	NO	This home is in a historic district and it would be an adverse effect to the district to build a noise wall.	---	---
107	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
108	NO	This home is in a historic district and it would be an adverse effect to the district to build a noise wall.	---	---

Impacted Receptor ID No.	Wall Feasible?	Reason	Wall Reasonable?	Wall Calculation
109	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
110	NO	These homes are in a historic district and it would be an adverse effect to the district to build a noise wall.	---	---
114				
116				
119				
180	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
183	NO	A wall at this location would cause sight distance issues at Rutland Dunn Town Line Road.	---	---
204	NO	A wall at this location would cause sight distance issues at South Quam Drive.	---	---
217	NO	A wall at this location would cause sight distance issues at Charles Lane.	---	---
220	NO	Because receptors are located as close as 4 feet from the edge of an over 40-foot rock cut, building and maintaining a wall would not be feasible.	---	---
221				
223				
224				
236	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
240	NO	This property is eligible for the NRHP. Adding a noise wall would be an adverse impact.	---	---
241	NO	The topography in this area would not support a noise wall.	---	---
248	NO	A wall would block the existing driveway causing access changes to the property and increased impacts to the property.	---	---
249	YES	---	NO	See Wall Calculation #1

The following noise wall location was found to be feasible, but not reasonable.

Wall No. 1

This wall location is an example of a wall that is not reasonable because there is only one receptor that can benefit and, therefore, the cost per receptor is too high. There are three impacted receptors that are each isolated from other impacted receptors. The three impacted receptors for which a noise wall would be feasible but not reasonable include receptor Nos. 52, 55, and 249. The location chosen for the cost calculation was receptor No. 249, located along US 51 approximately 95 feet from the existing centerline of the nearest travel lane for Alternative H. This receptor was used as a representative case to see whether a reasonable determination could be made for the other two receptors. This receptor location was chosen since it provided the best possibility of a potential noise wall benefit because the proposed traffic volumes are higher in this area than at receptor Nos. 52 and 55. The proposed wall was modeled 30 feet from the outside edge of the travel lane based on FDM 11-15 Attachment 1.9, *Clear Zone Distance Table*. See Figure D-3.3 for a schematic of the representative potential wall location.

Wall Height = 30 feet
Wall Length = 325 feet
Wall Cost = $273,000
Benefited Receptor = 0 (The receptor benefited by only 6 dBA. An impacted receptor needs to benefited by 9 dBA according to FDM 23-35-15.2)
The cost of the wall is over $47,000 and does not benefit the receptor by at least 9 dBA; therefore, a noise wall is not reasonable for all three locations.

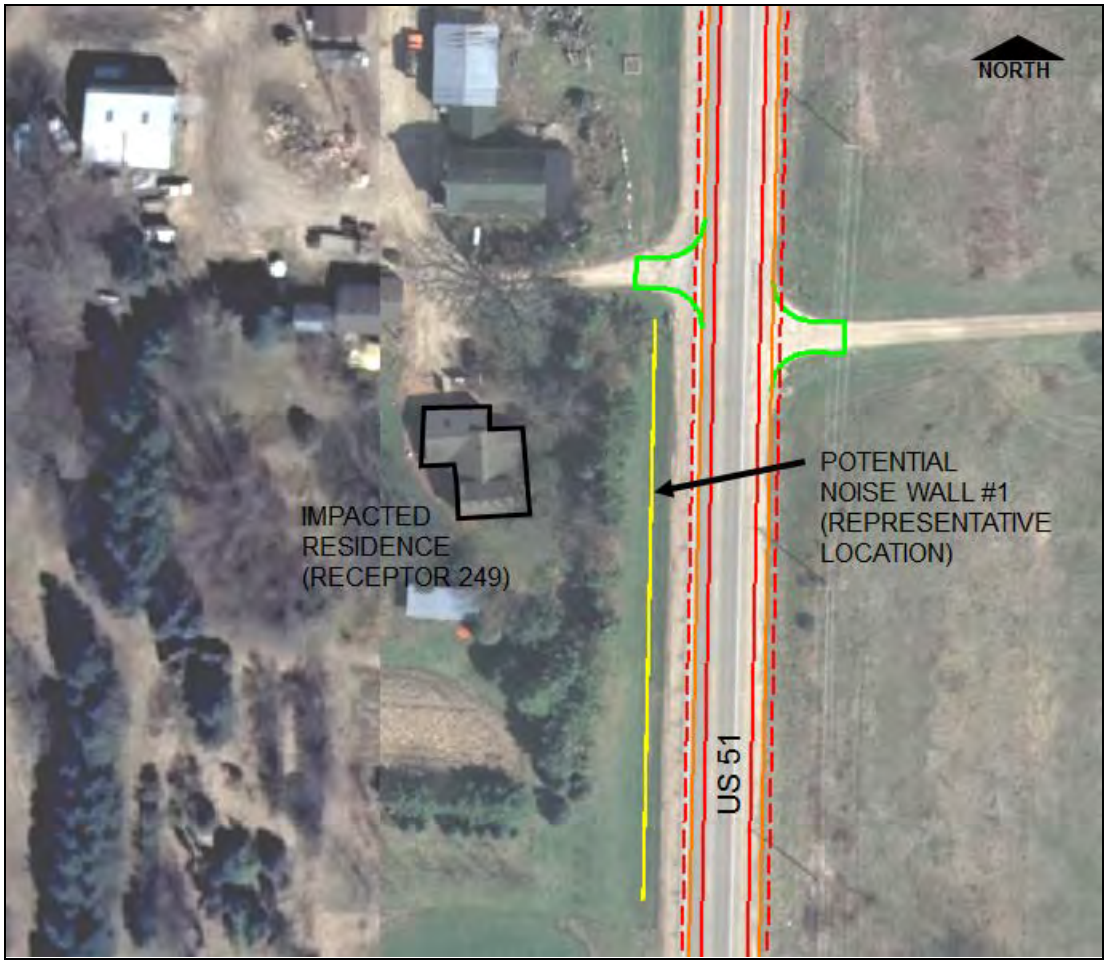


Figure D-3.3 Potential Noise Wall 1

4. The last of the four common mitigation measures is to soundproof a building. Only land use category D properties, which consist of auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios, are considered for soundproofing. WisDOT first considers all other mitigation measures before installing any soundproofing. These measures could include air conditioning, double-paned windows, or reducing window area. There are three category D properties that are currently impacted including a library, museum, and church. Discussions with the noise engineer determined that none of the category D properties would benefit from soundproofing.

Table D-3.3 Receptor Sound Levels

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
1	110	Residence	67	63	61	2	-4	N
2	260	Residence	67	58	56	2	-9	N
3	370	Commercial	72	56	54	2	-16	N
4	350	Residence	67	56	55	1	-11	N
5	85	Historic Property and Golf Course	67	65	65	0	-2	N
6	65	Residence	67	68	67	1	1	I
7	160	Farm	72	61	59	2	-11	N
8	185	Residence	67	61	60	1	-6	N
9	205	Residence	67	60	58	2	-7	N
10	80	Residence	67	67	66	1	0	I
11	115	Residence	67	64	63	1	-3	N
12	90	Residence	67	67	65	2	0	I
13	210	Residence	67	61	59	2	-6	N
14	155	Residence	67	63	61	2	-4	N
15	150	Residence	67	63	61	2	-4	N
16	85	Residence	67	66	64	2	-1	I
17	180	Residence	67	59	58	1	-8	N
18	130	Residence	67	65	63	2	-2	N
19	125	Residence	67	65	63	2	-2	N
20	405	Residence	67	54	53	1	-13	N
21	85	Residence	67	64	63	1	-3	N
22	765	Residence	67	48	47	1	-19	N
23	635	Residence	67	50	49	1	-17	N
24	70	Residence	67	68	67	1	1	I
25	95	Residence	67	66	65	1	-1	I
26	125	Residence	67	64	63	1	-3	N
28	95	Commercial	72	66	65	1	-6	N
29	100	Residence	67	65	64	1	-2	N
30	210	Residence	67	60	59	1	-7	N
50	75	Residence	67	65	64	1	-2	N
51	120	Residence	67	63	62	1	-4	N
52	45	Residence	67	69	67	2	2	I
53	70	Residence	67	66	65	1	-1	I
54	70	Residence	67	65	64	1	-2	N
55	50	Residence	67	68	67	1	1	I
56	100	Commercial	72	63	62	1	-9	N
57	90	Residence	67	63	61	2	-4	N
58	120	Residence	67	61	60	1	-6	N
59	70	Residence	67	64	63	1	-3	N
60	80	Residence	67	64	63	1	-3	N
61	75	Residence (Duplex)	67	64	62	2	-3	N
62	65	Residence	67	64	63	1	-3	N
63	140	Commercial	72	59	58	1	-13	N

[2] Use whole numbers only.
[3] Insert the actual Noise Level Criteria from FDM 23-30, Table 1.
[4] An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or** future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore, an impact occurs when Column (h) is –1 db or greater). I = Impact, N = No Impact.

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
64	90	Residence	67	61	60	1	-6	N
65	100	Dane County Human Services	67	61	60	1	-6	N
66	95	Commercial	72	62	61	1	-10	N
67	100	Commercial	72	61	60	1	-11	N
68	100	Commercial	72	61	60	1	-11	N
69	60	Residence	67	64	64	0	-3	N
70	60	Residence	67	64	63	1	-3	N
71	95	Commercial	72	61	60	1	-11	N
72	95	Commercial	72	61	60	1	-11	N
73	70	Residence (Duplex)	67	63	62	1	-4	N
74	95	Commercial	72	61	60	1	-11	N
75	135	Commercial	72	59	58	1	-13	N
76	65	Residence	67	63	62	1	-4	N
77	40	Residence	67	66	65	1	-1	I
78	60	Residence	67	63	62	1	-4	N
79	60	Residence	67	63	62	1	-4	N
80	45	Residence	67	66	65	1	-1	I
81	50	Residence	67	65	65	0	-2	N
82	50	Residence	67	64	63	1	-3	N
83	35	Commercial	72	66	66	0	-6	N
84	60	Residence	67	63	63	0	-4	N
85	60	Residence	67	65	64	1	-2	N
86	35	Residence	67	67	67	0	0	I
87	60	Residence	67	67	66	1	0	I
88	30	Commercial	72	64	63	1	-8	N
89	40	Youth Center	67	65	65	0	-2	N
90	25	Commercial	72	65	64	1	-7	N
91	35	Commercial	72	66	65	1	-6	N
92	35	Residence	67	68	68	0	1	I
93	25	City Hall/Opera House	67	64	64	0	-3	N
94	25	Commercial	72	68	68	0	-4	N
95	25	Commercial	72	66	65	1	-6	N
96	25	Post Office	67	67	66	1	0	I
97	25	Library	67	67	66	1	0	I
98	25	Commercial	72	62	61	1	-10	N
99	25	Commercial	72	64	64	0	-8	N
100	25	Commercial	72	64	63	1	-8	N
101	25	Commercial	72	61	60	1	-11	N
102	25	Church	67	64	63	1	-3	N
103	25	Stoughton Area Senior Center	67	64	63	1	-3	N
104	25	Norwegian Heritage center	67	66	65	1	-1	I
105	80	Commercial	72	63	62	1	-9	N
106	40	Residence	67	67	66	1	0	I
107	45	Church	67	68	67	1	1	I
108	30	Residence	67	67	66	1	0	I
109	45	Residence	67	67	66	1	0	I
110	30	Residence	67	68	67	1	1	I

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
111	140	Commercial	72	56	55	1	-16	N
112	95	Commercial	72	62	61	1	-10	N
113	40	Commercial	72	67	66	1	-5	N
114	25	Residence	67	68	67	1	1	I
115	50	Commercial	72	66	65	1	-6	N
116	35	Residence	67	66	65	1	-1	I
117	90	Commercial	72	63	62	1	-9	N
118	50	Commercial	72	66	65	1	-6	N
119	30	Residence	67	67	66	1	0	I
120	110	Commercial	72	61	60	1	-11	N
121	130	Commercial	72	60	59	1	-12	N
122	160	Commercial	72	59	58	1	-13	N
123	95	Commercial	72	62	61	1	-10	N
124	55	Commercial	72	64	63	1	-8	N
125	50	Residence	67	65	64	1	-2	N
126	95	Residence	67	62	61	1	-5	N
127	50	Commercial	72	65	64	1	-7	N
128	70	Commercial	72	64	63	1	-8	N
129	90	Commercial	72	61	60	1	-11	N
130	110	Commercial	72	61	60	1	-11	N
131	105	Commercial	72	61	60	1	-11	N
132	65	Commercial	72	64	63	1	-8	N
133	65	Commercial	72	64	63	1	-8	N
134	85	Commercial	72	63	62	1	-9	N
135	130	Commercial	72	60	59	1	-12	N
136	90	Commercial	72	62	61	1	-10	N
137	115	Commercial	72	61	60	1	-11	N
138	205	Commercial	72	57	56	1	-15	N
139	90	Commercial	72	62	61	1	-10	N
140	110	Commercial	72	60	60	0	-12	N
141	410	Commercial	72	52	51	1	-20	N
142	150	Commercial	72	59	58	1	-13	N
143	85	Commercial	72	62	61	1	-10	N
144	125	Commercial	72	60	59	1	-12	N
145	305	Commercial	72	54	53	1	-18	N
146	225	Health Services	67	56	55	1	-11	N
147	155	Commercial	72	57	57	0	-15	N
148	155	Commercial	72	57	55	2	-15	N
149	475	Residence	67	54	53	1	-13	N
150	200	Residence	67	60	59	1	-7	N
160	320	Residence	67	62	60	2	-5	N
161	110	Commercial	72	59	59	0	-13	N
162	260	Residence	67	58	57	1	-9	N
163	125	Commercial	72	62	60	2	-10	N
164	460	Commercial	72	53	52	1	-19	N
165	120	Commercial	72	61	60	1	-11	N
166	175	Commercial	72	62	60	2	-10	N
167	300	Commercial	72	57	57	0	-15	N
168	140	Commercial	72	61	60	1	-11	N
169	260	Commercial	72	58	58	0	-14	N
170	135	Commercial	72	62	61	1	-10	N

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
171	95	Commercial	72	66	64	2	-6	N
172	175	Commercial	72	62	61	1	-10	N
173	135	Commercial	72	64	62	2	-8	N
174	170	Commercial	72	63	61	2	-9	N
175	135	Commercial	72	64	62	2	-8	N
176	160	Commercial	72	65	62	3	-7	N
177	170	Commercial	72	65	62	3	-7	N
178	200	Commercial	72	63	62	1	-9	N
179	125	Commercial	72	67	65	2	-5	N
180	90	Residence	67	69	66	3	2	I
181	140	Residence	67	65	64	1	-2	N
182	60	Residence	67	N/A	71	Removed by Developer		
183	95	Residence	67	68	67	1	1	I
184	50	Residence	67	N/A	71	RELOCATION		
199	210	Commercial	72	56	61	-5	-16	N
200	510	Residence	67	63	54	9	-4	N
201	1110	Residence	67	59	46	13	-8	N
202	145	Residence	67	60	63	-3	-7	N
203	105	Residence	67	64	67	-3	-3	N
204	90	Residence	67	66	68	-2	-1	I
205	95	Residence	67	65	67	-2	-2	N
206	130	Residence	67	63	65	-2	-4	N
207	190	Residence	67	60	62	-2	-7	N
208	155	Residence	67	62	64	-2	-5	N
209	155	Church	67	63	62	1	-4	N
210	250	Residence	67	59	58	1	-8	N
211	284	Commercial	72	57	57	0	-15	N
212	430	Residence	67	55	54	1	-12	N
213	100	Commercial	72	66	67	-1	-6	N
214	245	Residence	67	60	60	0	-7	N
215	235	Commercial	72	59	58	1	-13	N
216	95	Commercial	72	66	64	2	-6	N
217	85	Residence	67	68	67	1	1	I
218	140	Residence	67	53	52	1	-14	N
219	150	Residence (Duplex)	67	62	60	2	-5	N
220	120	Residence	67	66	65	1	-1	I
221	80	Residence	67	70	69	1	3	I
222	125	Residence	67	N/A	62	RELOCATION		
223	75	Residence	67	70	68	2	3	I
224	80	Residence	67	69	68	1	2	I
225	135	Residence	67	64	64	0	-3	N
226	125	Residence	67	64	63	1	-3	N
227	140	Residence	67	65	63	2	-2	N
228	160	Residence	67	63	61	2	-4	N
229	150	Residence	67	62	63	-1	-5	N
230	150	Residence	67	62	62	0	-5	N
231	375	Residence	67	58	56	2	-9	N
232	95	Residence	67	64	64	0	-3	N
233	225	Residence	67	59	59	0	-8	N
234	140	Residence	67	63	64	-1	-4	N

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
235	100	Residence	67	65	66	-1	-2	N
236	120	Residence	67	67	65	2	0	I
237	100	Residence	67	N/A	67	Relocated as part of the 2024 roundabout project		
239	460	Residence	67	55	54	1	-12	N
240	60	Residence	67	71	70	1	4	I
241	50	Commercial	72	71	71	0	-1	I
242	490	Residence	67	57	57	0	-10	N
243	260	Residence	67	64	64	0	-3	N
244	120	Residence	67	64	65	-1	-3	N
245	65	Commercial	72	69	71	-2	-3	N
246	200	Residence	67	61	60	1	-6	N
247	70	Commercial	72	68	70	-2	-4	N
248	85	Residence	67	68	69	-1	1	I
249	95	Residence	67	66	66	0	-1	I
250	670	Residence	67	52	50	2	-15	N
251	760	Residence	67	51	49	2	-16	N
252	895	Residence	67	49	47	2	-18	N
270	265	Commercial	72	57	56	1	-15	N
271	120	Residence	67	59	60	-1	-8	N
272	100	Residence	67	61	62	-1	-6	N
273	100	Residence	67	62	61	1	-5	N
274	180	Residence	67	59	59	0	-8	N
275	100	Commercial	72	62	61	1	-10	N
276	100	Commercial	72	63	62	1	-9	N
277	95	Commercial	72	67	65	2	-5	N
279	90	Commercial	72	63	62	1	-9	N
280	55	Commercial	72	65	65	0	-7	N
281	120	Commercial	72	65	64	1	-7	N
282	145	Commercial	72	61	61	0	-11	N
283	95	Commercial	72	67	66	1	-5	N
284	285	Commercial	72	58	57	1	-14	N
285	125	Commercial	72	65	63	2	-7	N
287	220	Commercial	72	61	60	1	-11	N
300	185	Commercial	72	62	61	1	-10	N
301	265	Residence	67	61	60	1	-6	N
302	220	Commercial	72	61	60	1	-11	N
303	290	Commercial	72	59	58	1	-13	N
304	270	Residence	67	62	61	1	-5	N
305	225	Residence	67	60	59	1	-7	N
306	240	Residence (Duplex)	67	59	58	1	-8	N
307	140	Commercial	72	65	64	1	-7	N
308	240	Commercial	72	62	61	1	-10	N
309	165	Retirement Community	67	62	61	1	-5	N
310	315	Commercial	72	60	59	1	-12	N
311	220	Residence (Duplex)	67	61	60	1	-6	N
312	250	Residence (Duplex)	67	61	60	1	-6	N
313	270	Residence	67	60	59	1	-7	N

			Sound Level L_{eq}[2] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	**Distance from C/L of Near Lane to Receptor in feet (ft.)**	**Number of Families or People Typical of this Receptor Site**	**Noise Abatement Criteria [3] (NAC)**	**Future Sound Level**	**Existing Sound Level**	**Difference in Future and Existing Sound Levels (Col. e minus Col. f)**	**Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)**	**Impact[4] or No Impact**
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
		(Duplex)						
314	300	Residence (Duplex)	67	60	58	2	-7	N
315	325	Residence (Duplex)	67	59	58	1	-8	N
316	350	Residence	67	59	58	1	-8	N
317	420	Residence (Duplex)	67	58	57	1	-9	N
318	240	Residence	67	63	62	1	-4	N
319	275	Commercial	72	61	60	1	-11	N
320	250	Commercial	72	62	61	1	-10	N
321	160	Commercial	72	68	67	1	-4	N
322	200	Commercial	72	66	65	1	-6	N
323	190	Commercial	72	65	64	1	-7	N
324	175	Commercial	72	69	67	2	-3	N
325	235	Commercial	72	64	63	1	-8	N
326	145	Commercial	72	70	69	1	-2	N
327	190	Commercial	72	65	64	1	-7	N
328	245	Commercial	72	62	61	1	-10	N
329	205	Commercial	72	64	63	1	-8	N
330	190	Commercial	72	65	64	1	-7	N
331	215	Commercial	72	63	62	1	-9	N
332	190	Commercial	72	65	63	2	-7	N
333	260	Commercial	72	64	62	2	-8	N
334	165	Commercial	72	68	66	2	-4	N
335	170	Commercial	72	65	64	1	-7	N
350	80	Babcock Park	67	65	63	2	-2	N
351	80	Babcock Park	67	65	63	2	-2	N
352	80	Babcock Park	67	64	63	1	-3	N
353	80	Babcock Park	67	65	63	2	-2	N
354	80	Babcock Park	67	65	63	2	-2	N
355	80	Babcock Park	67	65	63	2	-2	N
356	80	Babcock Park	67	65	63	2	-2	N
357	80	Babcock Park	67	65	63	2	-2	N
358	80	Babcock Park	67	65	63	2	-2	N
359	80	Babcock Park	67	65	63	2	-2	N
360	80	Babcock Park	67	65	63	2	-2	N
361	80	Babcock Park	67	65	63	2	-2	N
362	80	Babcock Park	67	65	63	2	-2	N
363	80	Babcock Park	67	65	63	2	-2	N
364	165	Babcock Park	67	61	60	1	-6	N
365	165	Babcock Park	67	61	60	1	-6	N
366	165	Babcock Park	67	62	60	2	-5	N
367	165	Babcock Park	67	62	60	2	-5	N
368	165	Babcock Park	67	62	60	2	-5	N
369	165	Babcock Park	67	61	60	1	-6	N
370	165	Babcock Park	67	61	60	1	-6	N
371	165	Babcock Park	67	61	60	1	-6	N
372	165	Babcock Park	67	61	60	1	-6	N
373	165	Babcock Park	67	60	60	0	-7	N
374	165	Babcock Park	67	60	60	0	-7	N
375	165	Babcock Park	67	59	59	0	-8	N

HAZARDOUS SUBSTANCES OR CONTAMINATION EVALUATION

Wisconsin Department of Transportation

Factor Sheet D-4

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Briefly describe the results of the Phase 1 Hazardous Materials Assessment for this alternative. Do not use property identifiers (owner name, address or business name):
The study corridor was evaluated in Phase 1 HMAs dated March 2013 (I-39/90 to Voges Road, excluding downtown Stoughton), December 2013 (Larson Beach Road to Voges Road, accounting for recent design revisions in that section), and June 2015 (downtown Stoughton).

Site Reference #	Land Use of Concern (Past or Present)	Contaminants of Concern	Phase 1 Recommendations (No further action, or is a Phase 2, 2.5, or 3 recommended for this site, and why?)
March 2013 Phase 1 HMA **Site visits, file reviews, and Site Summary Forms were completed at 30 sites. Additional investigation or preparation of contract special provisions was recommended at six sites.**			
8	Retail gasoline sales	Petroleum	Phase 2.5
12	Retail gasoline sales	Petroleum	Prepare construction contract special provision and manage contaminated material, if encountered, during construction. No further action.
49	Petroleum storage in an underground storage tank (UST) at a residence	Petroleum	Phase 2
73	Retail gasoline sales	Petroleum	Prepare construction contract special provision and manage contaminated material, if encountered, during construction. No further action.
76	Retail gasoline sales	Petroleum	Prepare construction contract special provision and manage contaminated material, if encountered, during construction. No further action.
83	Retail gasoline sales and automotive repair	Petroleum	Phase 2 Investigation
December 2013 Phase 1 HMA **Site visits, file reviews, and Site Summary Forms were completed at 10 sites. No additional investigation was recommended.**			
June 2015 Phase 1 HMA **Site visits, file reviews, and Site Summary Forms were completed at 51 sites. Additional investigation or preparation of contract special provisions was recommended at 19 sites.**			
4	Petroleum underground storage tank (UST) at a business	Petroleum	Phase 2 Investigation
9	Retail gasoline sales and automotive repair	Petroleum	Phase 2 Investigation
13	Petroleum USTs at a business	Petroleum	Phase 2 Investigation
50	Retail gasoline sales and automotive repair	Petroleum	Phase 2 Investigation
62	Retail gasoline sales	Petroleum	Phase 2 Investigation
64	Retail gasoline sales	Petroleum	Phase 2 Investigation

Site	Land Use of Concern	Contaminants	Phase 1 Recommendations
100	Retail gasoline sales	Petroleum	Phase 2 Investigation
101	Petroleum tanks	Petroleum	Phase 2 Investigation
102	Petroleum tanks	Petroleum	Phase 2 Investigation
103	Petroleum tanks	Petroleum	Phase 2 Investigation
82	Automotive Repair	Solvents	Prepare contract special provisions. No further action.
87, 91	Industry and fuel storage	Petroleum	Prepare contract special provisions. No further action.
106	Petroleum tanks	Petroleum	Prepare contract special provisions. No further action.
107	Retail gasoline sales	Petroleum	Prepare contract special provisions. No further action.
31	Retail gasoline sales	Petroleum	Phase 2.5 to Phase 3 and/or prepare construction contract special provisions and manage contaminated material, if encountered, during construction.
34	Retail gasoline sales	Petroleum	Phase 2.5 to Phase 3 and/or prepare construction contract special provisions and manage contaminated material, if encountered, during construction.
35	Retail gasoline sales	Petroleum	Phase 2.5 to Phase 3 and/or prepare construction contract special provisions and manage contaminated material, if encountered, during construction.
36	Retail gasoline sales	Petroleum	Phase 2.5 to Phase 3 and/or prepare construction contract special provisions and manage contaminated material, if encountered, during construction.
105	Dry cleaner and retail gasoline sales	Petroleum and solvents	Phase 2.5 to Phase 3 and/or prepare construction contract special provisions and manage contaminated material, if encountered, during construction.

Additional comments: _____

2. Were any parcels not included in the Phase 1 assessment?

☒ No
☐ Yes–How many:
Why were they not reviewed?

3. **Have Phase 2, 2.5 or 3 Assessments been completed? Discuss the results.**

Site Reference #	Phase 2, 2.5 or 3 Recommendations	Materials Handling Plan or Remediation Recommended?		Is WisDOT a Responsible Party?	
		Yes	No	Yes	No
Map ID 8 (March 2013 Phase 1 HMA)	Phase 2.5 investigation identified the limits of petroleum contaminated soil and groundwater at the site and extending into the US 51 R/W. Construction contract special provision will be required for the management of contaminated materials that will likely be encountered during construction.		No		No
Map ID 49 (March 2013 Phase 1 HMA)	Phase 2 investigation did not detect any contamination. The location of the reported UST at the site is uncertain. This property will be a relocation. Before property acquisition, additional site and building inspection is recommended. The location of the UST should be determined and the UST should be removed before construction.	Yes			No

4. **Describe the results of any additional investigations performed by WisDOT or others: (Include the number of sites investigated, the level of investigation, and results for each site that relates to this project)**
   Beyond the Phase 2 and Phase 2.5 investigations described under Question 3, no other investigations have been completed by WisDOT. Past site investigations and remedial activities completed by responsible parties at other sites of concern are summarized in the Phase 1 HMA reports. No additional data has been collected on other potential, more recent site investigations.

5. **Describe proposed action to avoid hazardous materials contamination.**
   This will be determined following completion of additional Phase 2 and Phase 2.5 investigations, as needed. Construction impacts will be minimized or avoided to the extent possible. Attempts will be made to adjust the vertical and horizontal alignments of the roadway and utilities to avoid impacts.

6. **Describe the remediation and waste management practices to be included in the design for areas where contamination cannot be avoided (e.g., waste handling plan, remediation of contamination, design changes to minimize disturbances):**
   Where avoidance is not possible, the remediation measures employed would depend on the extent, magnitude, and type of contamination impacting the roadway. This level of information has not been acquired yet, but WisDOT will work with all concerned parties to ensure that appropriate remediation is completed to the satisfaction of the WDNR and WisDOT. The management of any wastes generated during investigation of project construction and the ultimate disposition of wastes will be completed to the satisfaction of the WDNR, WisDOT, and FHWA.

7. **List any parcels with known contamination which are proposed for acquisition:**
   None.

8. Asbestos

Have the bridges been inspected for the presence of asbestos containing material (ACM)?

☐ No–Explain
☒ Yes–Fill out the table. Insert additional rows as needed.

Bridge Number	Results of Asbestos Sampling	Proposed Work (Brief description)	List of the Appropriate Special Provision
B-13-0385 (replaced structure ID B-13-0932)	The caulk located in the parapet expansion joints contains less than 1 percent asbestos and, therefore, is not a regulated ACM.	Bridge Replacement	Special Provision 107-125 should be included in any future construction contract specifications.
B-13-060	The caulk located in the parapet expansion joints contains less than 1 percent asbestos and, therefore, is not a regulated ACM.	Bridge Rehabilitation	Special Provision 107-125 should be included in any future construction contract specifications.
B-13-512	N/A	No structure work is being proposed	Special Provision 107-125 should be included in any future construction contract specifications.

Note: All structures to be acquired and demolished or relocated require asbestos inspections and will be inspected once acquisition has taken place.

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Special consideration should be given to areas that are sensitive to water quality degradation. Indicate whether a sensitive area is present and provide specific recommendations on the level of protection needed.

☐ No, special natural resources are not affected by the alternative
☒ Yes, special natural resources exist in the project area

- ☐ WDNR designated Outstanding Resource Waters (ORW)
- ☐ WDNR Designated Exceptional Resource Waters (ERW)
- ☒ Wetland(s)
- ☒ Lake
- ☒ Endangered species or critical habitat
- ☒ Cold water stream
- ☐ Other waterways
- ☒ Areas of groundwater recharge
- ☒ Total Maximum Daily Load (TMDL)
- ☐ Other, describe:

Describe protection recommendations:

Specific features and requirements will be evaluated with WDNR staff during final design, but the following best management practices will be considered in these sensitive areas:

- Using vegetated swales and detention basins.
- Distancing outfalls away from waterway edges.
- Limiting the disturbance of natural drainage features and vegetation.
- Preparing/implementing an erosion and sediment control plan.
- Protecting areas that provide important water quality benefits and/or that are susceptible to erosion and sediment loss.
- Reducing runoff velocities by using weirs or other barriers to dissipate high velocities.

2. Indicate whether circumstances exist in the project vicinity that require additional consideration such as an increase in peak flow, total suspended solids (TSS) or water volume.

☐ No, additional or special circumstances are not present.
☒ Yes, additional or special circumstances exist. Indicate all that are present:

- ☒ Areas of groundwater discharge
- ☐ Stream relocations
- ☒ Long or steep cut or fill slopes
- ☐ Increased backwater
- ☐ Significant increase in impervious surface
- ☐ Rural to urban conversion
- ☒ Impaired waterway
- ☐ High velocity flows
- ☐ Large quantity flows
- ☐ Other–Describe any unique, innovative, or atypical stormwater management measures to be used:

3. Describe the overall stormwater management strategy to minimize adverse effects and enhance beneficial effects:

The proposed action would result in increased peak flow, TSS, and stormwater volumes in general because the improvements increase impervious surface areas. The sensitive areas identified would be considered during the design of stormwater management strategies for the project and special requirements, if needed, will be implemented in accordance with the WisDOT/WDNR Cooperative Agreement, TRANS 401, and to comply with the Rock River TMDL. Best management practices including use of vegetated swales, detention basins, and distancing outfalls from waterway edges will be considered to prevent potential adverse effects. Other features and requirements will be evaluated with WDNR staff during final design.

4. **Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 and the WDNR Transportation Separate Storm Sewer System permit (TS4) requirements:**
Best management practices including use of vegetated swales and distancing outfalls from waterway edges will be considered to prevent or minimize potential adverse effects. Other features and requirements of the WisDOT/WDNR Cooperative Agreement, TRANS 401, and to comply with the Rock River TMDL will be evaluated with WDNR staff during final design. Existing WisDOT major outfalls have been mapped by previous projects for portions of mainline US 51. Details regarding site-specific arrangements will be developed according to the proximity of specific resources (Lake Kegonsa, Yahara River, Lower Mud Lake, Lake Waubesa, wetlands and floodplains, streams, environmental corridors, and other resources), stormwater evaluations, and WDNR coordination.

5. **Identify the stormwater management measures to be considered:**

☒ Swale treatment (parallel to flow) Trans 401.106(10)	☒ In-line storm sewer treatment, such as catch basins, non-mechanical treatment systems
☒ Vegetated filter strip (perpendicular to flow)	☒ Detention basins
☒ Distancing outfalls from waterway edge	☐ Constructed storm water wetlands
☐ Infiltration–Trans 401.106(5)	☒ Buffer areas–Trans 401.106(6)
☐ Other–Describe:	☐ Other–Describe:

6. **Indicate whether any Drainage District may be affected by the project (**https://datcp.wi.gov/Pages/Programs_Services/DrainageDdistricts.aspx**).**

☒ No, none identified
☐ Yes, has initial coordination with a drainage board been completed?

☐ No, explain why:
☐ Yes, discuss results:

7. **Indicate whether the project is within a WDNR Municipal Separate Storm Sewer System (MS4) permitted stormwater management area or a WDNR TS4 stormwater management area.**

☐ No, the project is outside of a MS4 or TS4 stormwater management area
☒ Yes, the project affects one of the following and is regulated by a Wisconsin Pollutant Discharge Elimination System (WPDES) stormwater discharge permit, issued by the WDNR:

☒ A WDNR MS4 storm sewer system (connecting highways or local roads)
☒ A WDNR TS4 storm sewer system for WisDOT highways (outside of connecting highway limits)

Describe coordination and best management practices below and indicate location of evidence of coordination here:

TS4:	Coordination: Coordination with Dane County and the WDNR has occurred and is ongoing.	Best Management Practices: vegetated swales and detention basins; distancing outfalls away from waterway edges; limiting the disturbance of natural drainage features and vegetation; preparing/implementing an erosion and sediment control plan; protecting areas that provide important water quality benefits and/or that are susceptible to erosion and sediment loss; and reducing runoff velocities by using weirs or other barriers to dissipate high velocities.
MS4:	Coordination: Coordination with McFarland and Stoughton has occurred and is ongoing.	Best Management Practices: vegetated swales and detention basins; distancing outfalls away from waterway edges; limiting the disturbance of natural drainage features and vegetation; preparing and implementing an erosion and sediment control plan; protecting areas that provide important water quality benefits and/or that are susceptible to erosion and sediment loss; and reducing runoff velocities by using weirs or other barriers to dissipate high velocities.

8. Has the effect on downstream properties been considered?

☒ No, explain: Effects on downstream properties will be evaluated with WDNR staff during final design.
☐ Yes, coordination has been completed or is in process, describe:

EROSION CONTROL EVALUATION

Wisconsin Department of Transportation

Factor Sheet D-6

Alternative Alternative H	Total Length of Center Line of Existing Roadway 18.6 miles Length of This Alternative 17.7 miles
Preferred ☒ Yes ☐ No ☐ None identified	

1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.

Terrain along the US 51 corridor is flat to gently rolling. There are a few longitudinal 4 percent grades along the corridor, but most locations are 3 percent slopes or less. Existing roadway side slopes along US 51 are generally 4:1 to 6:1 (perpendicular to the roadway). With the proposed action, longitudinal grades would remain generally the same. Roadway side slopes would generally be 4 percent between the roadway and the sidewalk in urban areas and 6:1 for outside of the sidewalk and in rural areas.

Soils along the US 51 corridor are mostly silty loam to sandy loam subsoil. The soils throughout the corridor are mostly well drained.

2. Indicate all sensitive resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.

☐ No–there are no sensitive resources affected by the proposal.
☒ Yes–Sensitive resources exist in or adjacent to the area affected by the project.

- ☒ River/stream
- ☒ Lake
- ☒ Wetland
- ☒ Endangered species habitat
- ☐ Other–Describe _____

Describe protection recommendations:

The level of protection will be in accordance with the requirements of the WisDOT/WDNR Cooperative Agreement and TRANS 401. Best management practices including use of vegetated swales and distancing outfalls from waterway edges will be considered to prevent potential adverse effects. Other specific features and requirements will be evaluated with WDNR staff during final design.

3. Are there circumstances requiring additional or special consideration?

☐ No–Additional or special circumstances are not present.
☒ Yes–Additional or special circumstances exist. Indicate all that are present.

- ☒ Areas of groundwater discharge
- ☒ Overland flow/runoff
- ☒ Long or steep cut or fill slopes
- ☒ Areas of groundwater recharge (fractured bedrock, wetlands, streams)
- ☐ Other–Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances_____

4. Describe overall erosion control strategy to minimize adverse effects and/or enhance beneficial effects.

Guidelines and regulations for minimizing the potential for erosion and sedimentation for highway projects include the WisDOT Facilities Development Manual, Chapter 10–Erosion Control and Storm Water Quality, Wisconsin Administrative Code Chapter TRANS 401–Construction Site Erosion Control and Storm Water Management Procedures for Department Actions, and the WisDOT/WDNR Cooperative Agreement

Amendment–Memorandum of Understanding on Erosion Control and Storm Water Management. Key concepts are summarized as follows.

Basic Principles and Best Management Practices

a. The proposed improvements will be planned to fit topography, soils, drainage patterns, and natural vegetation to the extent practicable.
b. The size of exposed areas at any one time and the duration of exposure will be minimized.
c. Control measures will be used to prevent erosion and sedimentation in sensitive areas (proper design of drainage channels with respect to width, depth, gradient, side slopes, and energy dissipation); protective groundcover (vegetation, mulch, erosion mat, or riprap); diversion dikes and intercepting embankments to divert sheet flow away from disturbed areas; and sediment control devices (retention/detention basins, ditch checks, erosion bales, and silt fence).
d. Disturbed areas will be protected from off-site runoff and sediment will be prevented from leaving the construction site.
e. Runoff velocities will be kept low by maintaining short slope lengths, low gradients, and vegetative cover.
f. Disturbed areas will be stabilized as soon as practicable (temporary vegetation, mulch, stabilizing emulsions).

Geometric Design Features and Erosion Control Facilities

a. Smooth grade lines with gradual changes will be used.
b. Natural and existing drainage patterns will be preserved to the extent possible.
c. Stabilized slopes, soil, and streambanks will be left undisturbed where possible.
d. Trees and shrubs will be preserved, and overclearing will be prevented or minimized.
e. Irregular ditch profiles and steep gradients will be avoided where possible.
f. Vegetated ditches and drainage channels with wide, rounded cross sections will be used where applicable.
g. Culverts will be located and aligned to avoid erosion at the outlet and inlet.
h. An undisturbed buffer will be left between disturbed soil and sensitive areas where possible.
i. Using permanent and temporary seeding and sodding, mulch, erosion mat, and riprap will protect the soil surface.
j. Sediment will be removed and velocities reduced by using erosion bales, silt fence, stone or rock ditch checks, sediment traps, and basins.

ECIP

An ECIP that includes all erosion control commitments will be developed by the contractor before construction. The ECIP is required to be submitted to WDNR and WisDOT by the construction contractor two weeks before the preconstruction conference. WisDOT needs to approve the plan and obtain concurrence from WDNR before implementation.

5. Discuss results of coordination with the appropriate authorities as indicated below:

☒ WDNR
☐ American Indian Tribe

Note: All erosion control measures (i.e., the Erosion Control Plan) shall be coordinated through the WisDOT-WDNR liaison process and TRANS 401 except when tribal lands of American Indian Tribes are involved. WDNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor to prepare an ECIP, which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WDNR and to WisDOT 14 days before the preconstruction conference (Trans401.08(1)) and must be approved by WisDOT before implementation. On tribal lands, coordination for 402 (erosion) concerns are either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (USEPA). USEPA or the tribes have the 401 water quality responsibility on Tribal Trust lands. Describe how the Erosion Control/Stormwater Management Plan can be compatible.

Specific erosion control measures will be developed by WisDOT during final design and will be coordinated with WDNR. The need for coordination with the USEPA or the Tribes is not anticipated.

6. Will any special erosion control measures be implemented to manage additional or special circumstances identified in item 3 above?

☐ No
☒ Yes–Describe:

Specific erosion control measures will be developed by WisDOT during final design and will be coordinated with WDNR. The following erosion control measures will be considered.

- ☒ Minimize the amount of land exposed at one time
- ☒ Temporary seeding
- ☒ Silt fence
- ☒ Ditch checks
- ☒ Erosion or turf reinforcement mat
- ☒ Ditch or slope sodding
- ☐ Soil stabilizer
- ☒ Inlet protection
- ☒ Turbidity barriers
- ☐ Temporary settling basin
- ☒ Mulching
- ☒ Detention basin
- ☒ Vegetative swales
- ☐ Pave haul roads
- ☒ Dust abatement
- ☒ Rip rap
- ☐ Buffer strips
- ☒ Dewatering
- ☐ Silt screen
- ☒ Temporary diversion channel
- ☒ Permanent seeding